



DECISIVE FIRES



***THE INTEGRATION,
SYNCHRONIZATION, AND
EXECUTION OF FIRES WITH
COMBINED ARMS
OPERATIONS AT THE TF
LEVEL, TO ACHIEVE
MAXIMUM DESTRUCTION OF
THE ENEMY AND PRESERVE
THE TF'S FIGHTING
POTENTIAL***



House Rules



- ▲ EVERYONE PARTICIPATES
 - ▲ LEAVE PERSONAL PROBLEMS AT DOOR
 - ▲ (NO THIN SKINS)
 - ▲ TAKE NOTES
 - ▲ SPEAK LOUD AND CLEAR
- ▲ ESSENTIAL OUTCOMES
 - ▲ WHAT HAPPENED?
 - ▲ WHY IT HAPPENED?
 - ▲ HOW CAN WE SUSTAIN / IMPROVE?
- ▲ RELATE YOUR EXPERIENCE TO YOUR HOME STATION TRAINING
- ▲ TAKE OWNERSHIP AND STRIVE FOR IMPROVEMENT



FIRE SUPPORT PLAN



“Be cautious of complex fireplans. If you cannot remember the details, the fire plan is probably too complicated. Every leader should know the fireplan. It should be simple enough for all of your platoon leaders and scouts to memorize.”

FM 6-71, pg. 2-8



FIRE SUPPORT *a* “COMBAT MULTIPLIER”



- ▲ **FS enhances the maneuver commander's combat power by:**
 - ◆ **Destroy, suppress, and neutralize the enemy**
 - ◆ **Obscure the vision of the enemy**
 - ◆ **Isolate enemy formations and positions**
 - ◆ **Slowing and canalizing enemy movements**
 - ◆ **Killing and disabling the enemy at ranges greater than DF weapons**
 - ◆ **Screening with smoke or isolating areas with scatterable mines**
 - ◆ **Reducing the effect of enemy artillery by active counterfire**
 - ◆ **Interdicting following enemy echelons**

FM 71-123, pg.. 7-2



COMBAT POWER



THE COMBINATION OF:

Maneuver is rarely effective without
firepower and protection

MANEUVER

(positioning forces at decisive points)

FIREPOWER

(direct or indirect)

PROTECTION

(conserves fighting

potential)

FM 100-5 pg 2-10
LEADERSHIP



BATTLESPACE



- ▲ **A physical volume that expands or contracts in relation to the ability to acquire and engage the enemy. It contains the physical 3D view of the battlefield.**
- ▲ **Includes time, tempo, depth, and synchronization.**
- ▲ **At the tactical levels, battlespace is determined by the range of direct fire systems and the terrain on which they are applied.**
- ▲ **It is better to see, target, and hit the enemy at a distance from which he cannot hit back.**

FM 100-5, pg. 6-12



DECISIVE POINT



A point usually geographical in nature, that, when retained, provides a commander with a marked advantage over his opponent. Decisive points also include other physical elements such as enemy formations, command posts, and communications nodes. Decisive points help commanders gain or maintain the initiative.

FM 100-5, pg. 6-7

The bn main effort focuses on the decisive point during the decisive phase of the battle. A point is potentially decisive if the essential tasks and purpose of the command, determined through mission analysis, could be achieved there.

FM 71-123, pg. 1-30



FIRE SUPPORT PLANNING



- ▲ **Ensure that all available assets are employed in concert with your scheme of maneuver**
- ▲ **The continuous process of analyzing, allocating, and scheduling fire support**
- ▲ **The goal is to effectively integrate fire support into battle plans to optimize combat power**
- ▲ **Formal fire planning is conducted through a deliberate top-down process, with bottom-up refinement**

FM 6-71, pg. 3-1



FS PLANNING IMPERATIVES



- ▲ **Must be part of the MDMP and mirror the steps of the existing planning process**
- ▲ **Must truly integrate the targeting process and its functions of Decide, Detect, Deliver, and Assess**
- ▲ **Must support and be integrated with the collection (R&S) plan**
- ▲ **The result of FS planning must be an effective, integrated, and executable plan**

**White Paper, FS Planning
Bde & Below (Draft) 6 Jun 97**



THE FS PLAN IS...



EFFECTIVE--CLEARLY DEFINES AND FOCUSES
ON ACHIEVING THE EFFECTS REQUIRED
AGAINST IDENTIFIED HPTs.

INTEGRATED--PROVIDES FOR FOCUS AND
TIMING OF THE ACQUISITION AND ATTACK
SYSTEMS TO ACHIEVE A UNIFIED EFFECT ON
THE HPTs.

EXECUTABLE--HAS THE TIME, SPACE, AND
RESOURCES TO ACHIEVE THE EFFECTS AS
PLANNED.



COMBINED ARMS COMMANDER



- ▲ Ensure your guidance for fire support is clear
- ▲ What do you want fires to accomplish, where do you want the fires, and when do you want the fires
- ▲ Synchronize fires with the scheme of maneuver
- ▲ Approve the fires paragraph
- ▲ Train your company team commanders to know, understand and execute targets in their zones
- ▲ Clear indirect fires

FM 6-71, pg. 2-1



TF COMMANDER'S ROLE ("A WAY")



- ▲ **Integrate and synchronize fires with maneuver**
- ▲ **How? With guidance, ensure your plan is incorporated into the brigade plan, and fix responsibility for EFSTs**
- ▲ **Guidance: Articulate the TF concept of fires (EFSTs) as sequenced Tasks & Purposes for each FS asset (FA, mortar, CAS, CFZs)**
- ▲ **Ensure the brigade commander/staff understand the importance of TF EFSTs**
- ▲ **Ensure rehearsal of FS events for each EFST in the TF CAR**



TF CDR & TF FSO



- ▲ **The FSO's first obligation is to provide you with fire support that accomplishes your mission and keeps our soldiers alive in combat.**
- ▲ **His place of duty is where he best meets your needs or objectives.**
- ▲ **Each time you sit down with your S3 to discuss current or future plans, concepts, or COAs, your FSO should be there.**

FM 6-71, pg. 2-1



TF ROLE IN FS PLANNING



- ▲ Understand the integration of brigade maneuver and fires
- ▲ Understand the TF role in brigade scheme of fires
- ▲ “Executor” of their portion of brigade scheme of fires
- ▲ Develop TF concept and scheme of fires
- ▲ Integrate and refine brigade targets for close fight
- ▲ Plan synchronization of TF mortars with scheme of fires and their movement with scheme of maneuver
- ▲ Bottom-up refinement from company teams
- ▲ Forward TF concept of fires and refinement to brigade
- ▲ Rehearsals



COMPANY TEAM COMMANDER



- ▲ **The company team commander is the actual executor of the plan**
- ▲ **Ensures assigned targets are refined, observed, rehearsed, and fired according to the commander's scheme of fires**
- ▲ **Responsible for positioning FS personnel where they can best initiate and execute the fire plan**
- ▲ **Ensures his FSO attends all combined arms rehearsals and participates in FS rehearsals**

FM 6-71, pg. 2-7



TF FSO - MISSION ANALYSIS



- ▲ Bde scheme of fires
- ▲ Allocations FPFs, PriTgts, CAS
- ▲ FSCMs
- ▲ Specified tasks
- ▲ Implied tasks
- ▲ Limitations
- ▲ FA Org for Combat
- ▲ Recommended EFSTs
- ▲ Assets available
- ▲ FIST status
- ▲ Mortar status
- ▲ COLT allocated
- ▲ No. killing missions
- ▲ Smoke (length/dur)
- ▲ FASCAM
- ▲ CPH



TF FS PLANNING METHODOLOGY - EFSTs



TASK (WHAT)



DECIDE

FOCUS ON THE ENEMY (HPT)

DECISIVE POINT

PURPOSE (WHY)



DECIDE

SET CONDITIONS FOR MANEUVER

METHOD (HOW)



**DETECT
DELIVER**

***SEE THE
TERRAIN
ENEMY
YOURSELF***

ACQUIRE AND ATTACK

ENDSTATE



ASSESS

***DID WE ACCOMPLISH THE TASK?
DID THE TASK ACHIEVE THE
PURPOSE?***



FIRE SUPPORT PLANNING



**AFTER
MISSION
ANALYSIS**

**COMMANDER'S GUIDANCE
STATED AS: FA, MORTARS, CAS, CFZs
* TASK (EFFECT- ENEMY
FORMATION,/FUNCTION,)**

**FOR EACH
COA**

*** ~~PURPOSE (MANEUVER REASONS FOR
EFFECTS)~~ CONCEPT OF FIRES (INTEGRATION)**

**STATED AS: LOGICALLY SEQUENCED
* TASK, PURPOSE, METHOD, & END STATE
* ARRAY FIRES/EFSTS ON COA SKETCH**

**FROM
WAR GAME**

**SCHEME OF FIRES (SYNCHRONIZATION)
STATED AS:**

*** DETAILED SEQUENCE OF EVENTS THAT WILL
ACHIEVE THE CDR'S EFSTS
* OUTLINES SPECIFIC TARGETS, OBSERVERS,
ASSET, MUNITIONS, FSCMs, TRIGGERS, &
ASSESSMENT OF EVENT**



ESSENTIAL FIRE SUPPORT TASK



A Task for fire support to accomplish that is required to support a combined arms operation. Failure to achieve an EFST may require the commander to alter his tactical plan. A fully developed EFST has a Task, Purpose, Method, and Endstate.

**White Paper, Fire Support Planning for
The Brigade and Below (Draft), 6
Jun 97**



ESSENTIAL FIRE SUPPORT TASK



- ▲ **Task (what)** - effects of fires against a specific enemy formation and/or its function (may include duration/how long & when)
- ▲ **Purpose (why)** - in terms of and its relation or contribution to the scheme of maneuver
- ▲ **Method** - to acquire the enemy formation and deliver the means from a fire support asset to achieve the desired effects
- ▲ **Endstate** - quantifiable assessment to determine if task is accomplished & if purpose achieved



FS TASK & PURPOSE “A WAY”



- ▲ **T**- Suppress to prevent effective enemy direct fire
- ▲ **P** - Allow forces to occupy SBFs, ABFs, and reduce obstacles
- ▲ **T** - Obscure to deny enemy visual contact with support & breach forces
- ▲ **P** - Allow support force to occ SBF & Breach force to reduce obstacle
- ▲ **T** - Destroy #? BMPs/Tanks
- ▲ **P**- Create favorable force ratios for the BCT/TF
- ▲ **T** - Destroy CSOP
- ▲ **P** - Allow lead TF unimpeded movement through security zone
- ▲ **T** - Destroy MRP
- ▲ **P** - Create salient in MRB Def for Asslt force



FS TASK & PURPOSE “A WAY”



- ▲ **T**- Activate/refine CFZ to acquire RAG fires during breach
- ▲ **P** - Preserve Support & Breach forces combat power
- ▲ **T** - Emplace FASCAM to fix MRC in BP to prevent repositioning
- ▲ **P** - Allow TF to mass on flank MRC with favorable force ratio
- ▲ **T** - Emplace FASCAM to delay enemy formation 10-15 minutes separating echelons
- ▲ **P**- Allow TF to fight echelons sequentially
- ▲ **T** - Destroy dismounted IN strongpoint reducing MRB Def battlespace
- ▲ **P** - Allow breach force to reduce obstacle w/out taking dismounted AT fire



CONCEPT OF FIRES (INTEGRATION)



- ▲ The logical sequence of *EFSTs* assigned to fire support assets, integrated with the scheme of maneuver to accomplish the mission and achieve the commanders intent
- ▲ Forms the *Fires Paragraph*
- ▲ *TASK & PURPOSE* drives the “*FOCUS OF FIRES*”
- ▲ Support the “*DECISIVE POINT*”



CONCEPT OF FIRES “A WAY”



EFST 1

T - DESTROY 3 VEHS OF THE CSOP FORCING ITS WITHDRAWAL

P - ALLOW THE LEAD CO TMs (SUPPORT FORCE) TO MOVE UNIMPEDED FROM DIRECT FIRE CONTACT UP TO MEL OF THE MAIN DEF BELT

M -ACQUIRE-RESERVE CO FIST W/SCOUTS, ATTACK- PRI - FA CPH, ALT FA DPICM

E - CSOP DETROYED OR WITHDRAWN, LEAD CO TMS SET IN ASSLT POS



CONCEPT OF FIRES ***"A WAY"***



EFST 2

T -CONTINUOUSLY SUPPRESS THE S. MRC FOR 50 MIN TO PREVENT IT FROM EFFECTIVELY ENGAGING THE SUPPORT AND BREACH FORCES

P - ALLOW SUPPORT FORCE TO OCCUPY SBF AND THE BREACH FORCE TO REDUCE THE OBSTACLE WITHOUT TAKING EFFECTIVE DIRECT FIRE

M -ACQUIRE-TF SCOUTS, ATTACK- FA BN CONTINUOUS SUPPRESSION, 50 MIN, GROUP TARGET

E - SUPPORT FORCE SET IN SBF WITH NO LOSSES AND TWO LANES EMPLACED AND PROOFED BY BREACH FORCE



CONCEPT OF FIRES ***"A WAY"***



EFST 3

- T - OBSCURE THE S. MRC FOR 120 MIN TO DENY IT VISUAL CONTACT WITH THE SUPPORT AND BREACH FORCES LIMITING ITS TARGET ACQUISITION**
- P - ALLOW SUPPORT FORCE TO OCCUPY SBF AND THE BREACH FORCE TO REDUCE THE OBSTACLE WITHOUT TAKING EFFECTIVE DIRECT FIRE**
- M - ACQUIRE-TF SCOUTS, ATTACK-FA SMK 1000M, 120 MIN**
- E - SUPPORT FORCE SET IN SBF WITH NO LOSSES AND TWO LANES EMPLACED AND PROOFED BY BREACH FORCE**



CONCEPT OF FIRES

"A WAY"



EFST 4

- T - SUPPRESS THE INFANTRY STRONGPOINT FOR 30 MIN TO PREVENT IT FROM EFFECTIVELY ENGAGING THE BREACH FORCE WITH DISMOUNTED AT SYSTEMS**
- P - ALLOW THE BREACH FORCE TO REDUCE THE OBSTACLE WITHOUT TAKING EFFECTIVE AT FIRE**
- M - ACQUIRE- SUPPORT FORCE FIST, ATTACK- MORTAR PLT CONTINUOUS SUPPRESSION 30 MIN**
- E - TWO LANES EMPLACED, PROOFED, AND MARKED**



FIRES PARAGRAPH



- ▲ **SUBPARAGRAPH OF THE CONCEPT OF OPERATION**
- ▲ **INCLUDES COMMANDER'S CONCEPT OF FIRES, SHOULD MIRROR THE SCHEME OF MANEUVER**
- ▲ **PARAGRAPH**
 - ◆ **EFSTs DESCRIBED IN SEQUENCE OF EXECUTION BY PHASE OR EVENT**
 - ◆ **USES, TASK, PURPOSE, METHOD, AND END STATE.**



SYNCHRONIZATION



Arranging activities in time and space to mass at the decisive point.

FM 100-5, pg. 2-8

The precise arrangement of coordinated activities in time, space, and purpose to produce the most effective fires. Both a process and a result.

FM 6-20, pg. 1-3



WARGAMING



A mental exercise to select a course of action. Each COA must be wargamed to consider the implications of both friendly and enemy options during an operation. Action-Reaction- Counteraction. This requires the Cdr, FSO, S2, and S3 to make a joint analysis of the various COAs. To be active participants FSOs must be knowledgeable of all maneuver and fire support systems.

FM 71-123, pg. 7-23



SCHEME OF FIRES (SYNCHRONIZATION)



**THE DETAILED, LOGICAL
SEQUENCE OF FIRE SUPPORT
EVENTS TO ACQUIRE AND ATTACK
THE ENEMY IN TIME AND SPACE
NECESSARY TO ACCOMPLISH THE
COMMANDER'S ESSENTIAL FIRE
SUPPORT TASKS**



SCHEME OF FIRES



- ▲ **WHAT MAKES UP A SCHEME OF FIRES?**
 - ◆ **EVENT.**
 - **TARGET(LOCATION & DESCRIPTION)**
 - **ENGAGE ENEMY FORMATION**
 - **CFZ**
 - ◆ **TRIGGER**
 - ◆ **TASK (WHAT) / PURPOSE (WHY)**
 - ◆ **OBSERVER (PRIMARY / ALTERNATE)**
 - ◆ **OBSERVATION POINTS**
 - ◆ **METHOD (ACQUIRE/ATTACK)**
 - ◆ **END STATE = TASK & PURPOSE ACHIEVED?**
 - ◆ **FSCMs**
 - ◆ **PRIORITY OF FIRES**
 - ◆ **BATTLE HAND-OVER**



FIRE SUPPORT EXECUTION MATRIX



- ▲ **Concise, easy planning and execution tool that shows the many factors of a fire support plan**
- ▲ **Helps the FSO & Cdr understand how the fireplan supports the scheme of maneuver**
- ▲ **Explains what aspects of the fire support plan the FSO & each FO are responsible for**
- ▲ **The primary execution tool**
- ▲ **Always corresponds to phases established on maneuver execution matrixes**
- ▲ **Format of and information will vary from unit to unit**

FM 6-20-20, pg. 2-7



FSEM "A WAY"



MVR EVENT			
FS EVENT #			
TRIGGER			
TASK			
PURPOSE			
METHOD			
OBSERVER (PRI, ALT)			
FA POF			
MORTAR POF			
FSCMs			
ASSESS/ REMARKS			

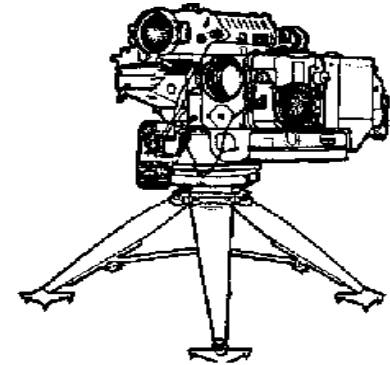


TARGETING FUNCTIONS



▲ **DECIDE**

- provides overall focus (what & why)
- sets priorities



▲ **DETECT**

- directed effort to acquire the enemy (formation/HPT)
- maximum use of all assets (scouts, FISTs, FOs, MVR shooter, COLT, GSR)
- collection plan

FM 6-20-10



TARGETING FUNCTIONS



▲ DELIVER

- apportion and task appropriate attack asset to execute attack guidance (FA, mortar, CAS, NGF, non-lethal)

▲ ASSESS

- task accomplished? Purpose achieved?
- combat assessment (BDA, munitions effects, reattack recommendations)
- effects of fires can only be properly assessed by an observer or an analyst
- observers must understand the desired effects

FM 6-20-10



REQUIREMENTS OF A TARGET



- ▲ **TASK**
- ▲ **PURPOSE**
- ▲ **LOCATION** (don't forget altitude)
- ▲ **TRIGGERS** (include limited visibility)
- ▲ **OBSERVER / BACKUP OBSERVER**
- ▲ **ACQUISITION DEVICE** (gvld, melios, binos, compas)
- ▲ **CONSIDER ADJUST FIRE**
- ▲ **DESIGNATED COMMUNICATIONS NET** (pri/alt)
- ▲ **REHEARSAL** (call for fire)
- ▲ **REFINEMENT**
- ▲ **ASSESS** (Task accomplished? Purpose achieved?)



TARGET REFINEMENT



“If you begin a battle and no refinements have been made to the original target list, then you are in for a long day.”

pg. 2-7

FM 6-7,



COMMON TARGETING MISCONCEPTIONS



- ▲ **TARGETS MUST BE PLACED EVERYWHERE ON THE BATTLEFIELD BECAUSE WE MAY HAVE TO SHOOT EVERYWHERE ON THE BATTLEFIELD.**
- ▲ **TARGETS MUST BE PLACED ON TOP OF OBSTACLES.**
- ▲ **EVERY TEMPLATED ENEMY POSITION MUST BE TARGETED.**
- ▲ **PREPARATION FIRES ARE A MUST AND THEY MUST BE FIRED AS GROUPS.**
- ▲ **HILLTOPS AND ROAD INTERSECTIONS MAKE GOOD TARGETS.**
- ▲ **THE FSO COMPLETES THE TARGETING AFTER THE WAR GAMING SESSION.**
- ▲ **TARGETING IS THE FSO'S "BABY."**



TARGET REFINEMENT



- ▲ **REFINEMENT DOES NOT CHANGE THE TASK & PURPOSE OF THE TARGET, ONLY THE LOCATION**
 - ◆ **ENSURE THE TARGET STILL MEETS THE COMMANDER'S GUIDANCE.**
 - ◆ **ENSURE THE REFINED TARGET LOCATION IS STILL SYNCHRONIZED WITH THE IPB**
- ▲ **VERIFY THE OBSERVER FOR THE REFINED TARGET**
- ▲ **VERIFY THE TRIGGER REFINED TARGET**
- ▲ **DISSEMINATES THE NEW LOCATION FOR THE REFINED TARGET. (ASSIGN A NEW TARGET NUMBER TO AVOID CONFUSION/WRONG GRIDS.)**
- ▲ **REHEARSE TARGET EXECUTION FOR THE REFINED TARGET**



OBSERVATION PLAN

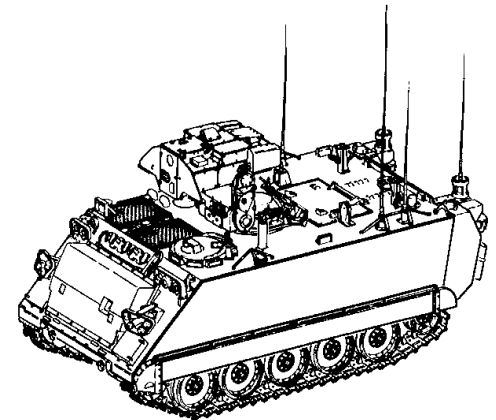


THE CHALLENGE

***“ACQUIRE THE ENEMY BEFORE ENTERING HIS
BATTLESPACE”***

▲ Considerations:

- ◆ IPB: Terrain analysis/Enemy SITEMP/EVENT TEMP
- ◆ Target acquisition devices (capabilities) FIST & FOs
- ◆ Movement
- ◆ Security
- ◆ Scouts
- ◆ Maneuver Shooters
- ◆ Colts: Hand off from deep to close





OBSERVATION PLAN



- **DETERMINE THE NEED FOR AN OBSERVATION**
 - Identify Targets / NAI's / TAI's and Assign Observers
 - Make sure Observer is Appropriate for the Task
- **CONDUCT A COMPLETE TERRAIN ANALYSIS**
 - Map Recon
 - Terra Base
- **ALLOCATE THE ASSET**
 - G/VLLD & MILIOS Batteries Charged for Dismounted Operation
- **SELECT THE OP**
 - Select Primary & Alternate OP's from those available after Terra
 - Consider Copperhead Template, Survivability, and Weather
- **COORDINATION & SECURITY**
 - Coordinate for: Retrans, Battery & Mortar Location Support
 - Ensure Company maintains Security, Initiate FSCM's

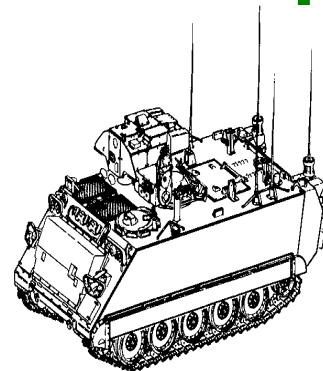


OBSERVATION PLAN



“Techniques”

- ▲ **Assign responsibility for Task & Purpose (EFSTs) to CO TM CDRs/FSO/Scouts**
- ▲ **Integrate Scouts! They're great observers to initiate & adjust smoke and suppression for H/DATK**
- ▲ **Dismounted FOs. Use'em. Consider task organizing them with the scouts.**
- ▲ **FISTs. Set providing overwatch forward of the TF's lead elements. Move by successive or alternate bounds. Don't leave the security of the Co TM formation until necessary.**



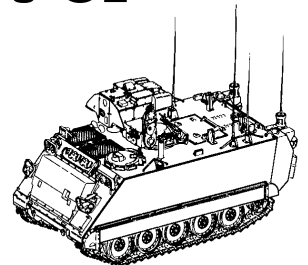


OBSERVATION PLAN



“Techniques”

- ▲ **Redundancy essential (primary/backup)**
- ▲ **FIST Employment options: Centralized Vs De-Centralized**
- ▲ **Consider employing reserve company FIST as a
TF COLT**
- ▲ **Defense: FISTs mounted Vs dismounted**
- ▲ **Weigh risks of employment in support of Counter recon Co**
- ▲ **If COLT attached, task org with scout:**



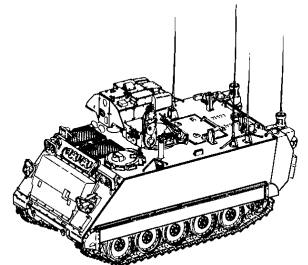


FISTV & OP POSITIONING



- ▲ Position to optimize observation and lazering capability
- ▲ Position to communicate with observers, Cdr, & firing units
- ▲ Position in hull defilade
- ▲ Consider dismounting the G/VLLD
- ▲ Coordinate for security
- ▲ In the offense provide overwatch by bounding forward
- ▲ Do not locate with lead elements in the offense
- ▲ Reverse slope Vs forward slope
- ▲ Recon OP (map, ground)
- ▲ Avoid landmarks and prominent terrain features

FM 6-30





TARGET ACQUISITION “PREP & TECHNIQUES”



- ▲ G/VLLD PCC - boresight verification of azimuth and vertical angle
- ▲ Boresight thermal sight with G/VLLD (HGSS must use DAP)
- ▲ Lase target minimum of 3 times, compare data
- ▲ Always send target altitude
- ▲ Observer location PLGGR FOM 1
- ▲ Always conduct target location and observer location gross error check using map spot
- ▲ Rehearse SLOCTOP battle drill, **HEAD UP & SCANNING**



TARGET ACQUISITION “PREP & TECHNIQUES”



- ▲ Degraded operations - Have a plan: G/VLLD dismounted, charged G/VLLD batteries, MELIOS, AN/GVS 5, Binos, declinated M2 compass, PLGGR FOM 1, manpack radios, jump vehicle (consider CO TM TAC M113)
- ▲ Defense: target area survey, mark target, emplace physical tactical and execution triggers to include limited visibility, deconflict with direct fire TRPs, terrain sketch, visibility diagram, measure cloud height
- ▲ Target location suspect, use *ADJUST FIRE*



SUPPRESSION



- ▲ Fires on or around a weapon system, to degrade its performance
- ▲ Used to prevent effective fire on friendly forces
- ▲ Typically used to support a specified movement of forces
- ▲ Lasts only as long as the fires continue
- ▲ Duration of suppression is either specified in the call for fire or established by SOP

FM 6-20-10, pg. 2-8



SMOKE



- ▲ **Obscuration smoke** - employed on or near the enemy to minimize his vision both within and beyond his position area
- ▲ **Screening smoke** - employed in areas of friendly operation or in areas between friendly and enemy forces to conceal ground movement

FM 101-5-1



MASSING FIRES



- ▲ **Simultaneous execution of two or more firing elements to achieve maximum effects on a critical target.**

FM 6-40, pg 5-13

- ▲ **Fire control is used with maneuver to bring the maximum available direct and indirect fires on the enemy's positions or formation while avoiding the mistaken engagement of friendly forces.**
- ▲ **Fires should be distributed to completely cover the enemy. Ideally, each weapon should fire at a different target or part of the enemy.**
- ▲ **FM 71-2, pg. 2-34**

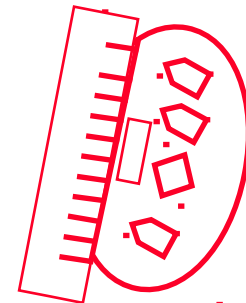
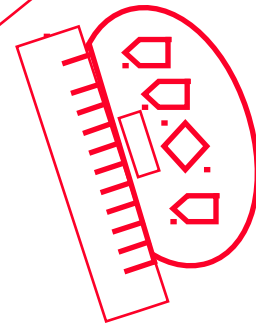


MASSING FIRES



DESTRUCTION:

**BN mass, appropriate
volume, converged
sheaf on single
targets, i.e. BMP -
BN 1, Tank BN - 3**



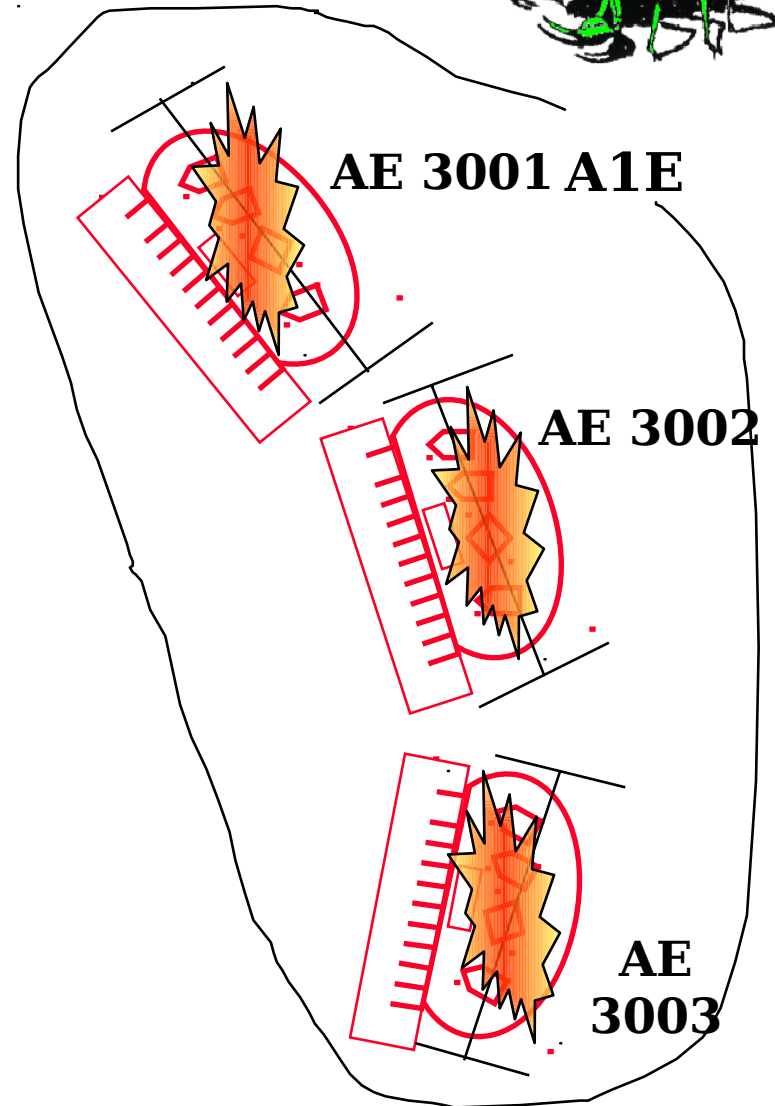


MASSING FIRES



SUPPRESSION

- ◆ MASS is defined by suppressing the maximum number of enemy direct fire systems with the minimal fire units (**ECONOMY OF FORCE**)
- ◆ Suppression last only as long as the fires continue
- ◆ Area effect/consider tgt size/geometry (linear tgt)
- ◆ Groups work
- ◆ Focus on enemy





PRIORITY OF FIRES



- ▲ **HOW TO DETERMINE POF.**
 - ◆ **WHO HAS THE MAIN EFFORT?**
 - ◆ **WHEN, WHERE, AND WHY?**
 - ◆ **WHEN DO PRIORITIES SHIFT?**
 - ◆ **INCLUDE ALL FIRE SUPPORT SYSTEMS.**
- ▲ **DESIGNATE PRIORITY FOR FA, MORTARS, AND CAS BASED ON MANEUVER CONCEPT OF THE OPERATION.**
- ▲ **POF GOES TO THE MANEUVER ELEMENT THAT IS DESIGNATED AS THE MAIN EFFORT OR THE MOST VULNERABLE TO ENEMY ATTACK.**
- ▲ **COVER ALL PHASES OF THE OPERATION.**



FS CONSIDERATIONS DEFENSE



- ▲ FIRE SUPPORT ASSETS EXTEND THE CDR'S BATTLESPACE
- ▲ AUGMENT THE SECURITY ZONE WITH OBSERVERS
- ▲ DESIGNATE WHERE YOU WANT YOUR ARTILLERY TO MASS ON THE ENEMY. BE SPECIFIC (OBSTACLES)
- ▲ ENSURE YOUR FIRE SUPPORTERS ARE POSITIONED WHERE THEY CAN BEST EXECUTE THE FIRE PLAN
- ▲ REFINEMENT OF TARGETS IS CRITICAL. REHEARSE THE FIRE PLAN
- ▲ ENSURE ALL TARGETS HAVE REDUNDANT OBSERVERS AND TRIGGERS (INCLUDE LIMITED VISIBILITY)
- ▲ PLAN FSCMs TO FACILITATE RAPID ENGAGEMENT OF THE ENEMY
 - ◆ CFL CLOSE TO FORWARD ELEMENTS
 - ◆ NO FIRE AREAS ON FORWARD POSITIONS

FM 6-71, PG. 4-7



ENGAGEMENT AREA DEVELOPEMENT



***SHAPE THE BATTLESPACE AND
MASS AT THE DECISIVE POINT***

- ▲ Build the EA inside out
- ▲ Develop timeline w/priorities of work/supervise
- ▲ Top down plan - bottom up refinement
- ▲ Timely distribution & refinement of target list
- ▲ Emplace & integrate targets with obstacles & DF plan
- ▲ Emplace Triggers (visual/thermal/laser)
- ▲ Position observers to see targets & triggers



ENGAGEMENT AREA DEVELOPEMENT



- ▲ Ensure redundant eyes cover EA
- ▲ Deconflict triggers with TRPs
- ▲ Target area survey
- ▲ Include FISTs in TF survivability plan
- ▲ Synchronize mortar registration per METT-T
- ▲ CZ or NFA on mortars
- ▲ Proof EA
- ▲ Mounted Rehearsal
- ▲ CFZs based on PLGGR grids of BPs
- ▲ Include essential tasks in TF defensive prep timeline
- ▲ Coordinated team effort/Centralized Vs decentralized



TRIGGERS



- **PHYSICAL TRIGGER**

- VS 17 Panels
- 4 X 4 Plywood Painted
- Terrain
- Aircraft Field Landing Lights (NVG only)

- **LIMITED VISIBILITY TRIGGERS**

- Thermal: 5gallon can with JP8, grease and sand
- Reverse Polarity Paper (Thermal only)
- Aircraft Field Landing Lights (NVG only)

- **LAZER TRIGGER**

- BTMS Panel: Both VS 17 and Reverse Polarity

- Grid, Azimuth, Vertical Angle, and Distance Reco



KILLING WITH INDIRECT FIRE IN EA



- * TO ENGAGE A MOVING TGT IN EA
 - * DECIDE WHERE TO KILL HIM (TAI)
 - * REFINE/INTEGRATE TGTs W/OBSTACLE S
 - * POSITION OBSERVERS
 - * EMPLACE TRIGGERS (LIMITED VIS)
- * REHEARSAL!!!

**ENEMY DECISION POINT
"LAY TRIGGER"**

REPORTS ENEMY N OR S

**TO IMPACT HERE
ENEMY ROM 5-7 MIN
CFF HERE/TRIGGER**

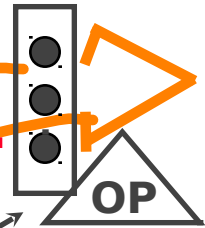


NAI

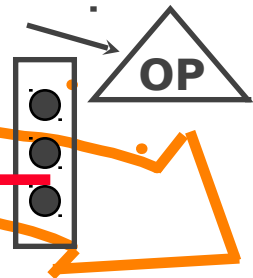
CFF
(AMC?)



NAI



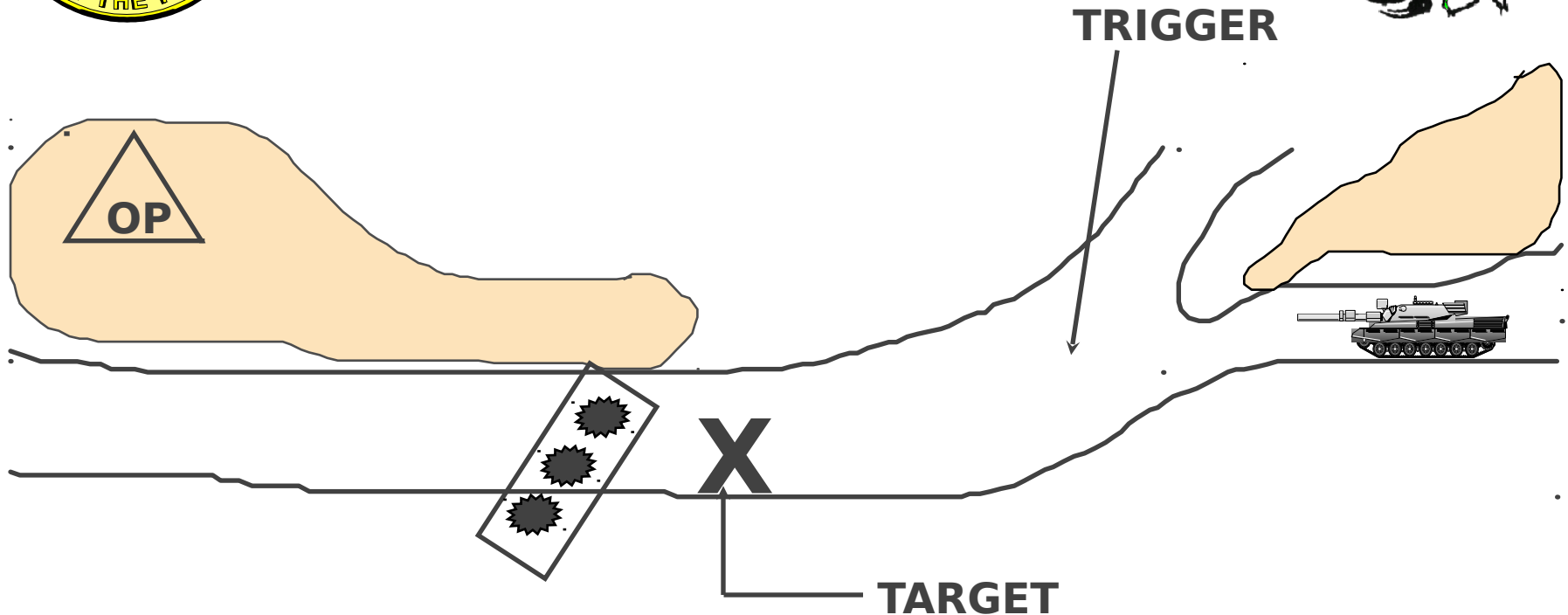
* CMD TO FIRE
IF AMC
** REPORTS
BDA



ENEMY ROM 5-7 MIN



EA TARGET REHEARSAL



- ▲ KEY PLAYER IS THE COMPANY / TEAM FSO
- ▲ ORIENT OBSERVERS TO TRIGGER POINT AND TARGET
- ▲ VALIDATE TARGET / TRIGGER POINT DISTANCE
- ▲ INTEGRATES INDIRECT FIRES WITH OBSTACLES
- ▲ CONFIRMS OWNERSHIP



FIRE SUPPORT DELIBERATE ATTACK



- ▲ **TARGET THE ENEMY SECURITY ZONE (csop)**
- ▲ **PLAN FIRES ALLOWING SUPPORT FORCE TO SET**
- ▲ **PLAN FOR SUPPRESSION & OBSCURATION FOR BREACH**
- ▲ **SHIFT SUPPRESSION & OBSCURATION TO SUPPORT ASSAULT**
- ▲ **PREP FIRES: WEIGH BENEFITS VS DRAWBACKS**
- ▲ **PLAN FIRES AGAINST COUNTERATTACKS**
- ▲ **CONSIDER MORTAR FIRES ON IN STRONPOINT & AT RESERVE**
- ▲ **EYES ON TARGET TO CONFIRM EFFECTS AND ADJUST**
- ▲ **EMPLOY CAS W/SEAD**
- ▲ **ACTIVATE CFZs OVER BREACH & SUPPORT FORCES**
- ▲ **USE ON-ORDER CFLs**



PREPARATION FIRES



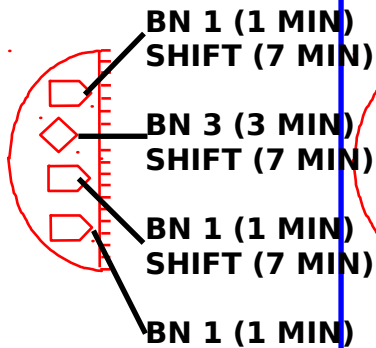
- ▲ **IS THERE TIME TO PREP ONCE THE ENEMY OCCUPIES HIS BATTLE POSITION**
- ▲ **ARE THERE ENOUGH TARGETS TO WARRANT A PREPARATION?**
- ▲ **CAN THE ENEMY RECOVER BEFORE THE SUPPORTED UNIT IS ABLE TO EXPLOIT THE PREPARATION FIRES?**
- ▲ **WILL THE LOSS OF SURPRISE FROM THE PREPARATION BE OFFSET BY THE DAMAGE DONE TO THE ENEMY?**
- ▲ **THE DURATION DEPENDS ON:**
 1. **THE NATURE OF THE TARGET.**
 2. **THE DESIRED EFFECTS AND AMMO AVAILABLE.**
 3. **AMMUNITION AVAILABLE.**
 4. **TUBES AVAILABLE.**



TIME TO KILL AT THE POINT OF PENETRATION

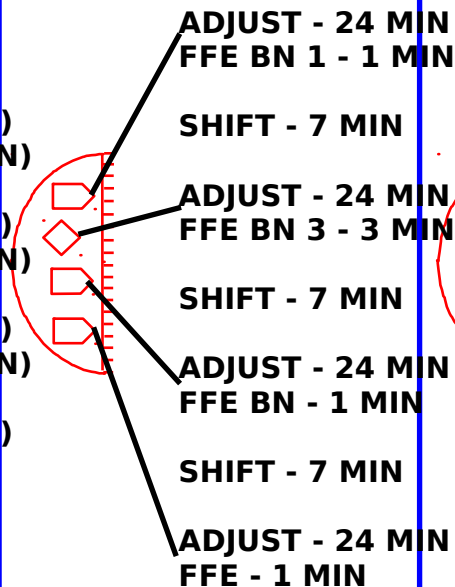


F.F.E. TO KILL



27 MINUTES

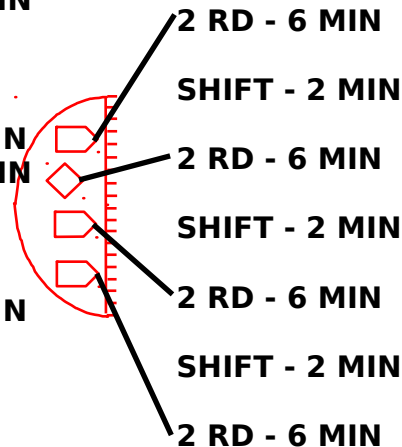
ADJUST FIRE TO KILL



ADJUST = 3 RDS

131 MINUTES

COPPERHEAD TO KILL

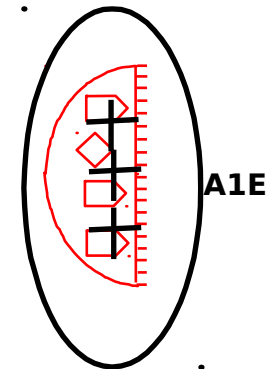


**4 GUNS /
OBSERVER SHIFT**

30 MINUTES

CAS TO KILL

SEAD = 2 X A1E -1 MIN



**2 SORTIES W/ SEAD
FROM IP TO TGT X 2**

15 MINUTES



BREACHING FUNDAMENTALS



SUPPRESSION

- ▲ The focus of all available fires on enemy personnel, weapons, and equipment to prevent effective fires on friendly forces
- ▲ Purpose is to protect forces reducing and moving through the obstacle
- ▲ Suppression begins with artillery fires on the defender. This assists the support force to move into its ABF
- ▲ Fire control measures are used to ensure that all fires are massed, lifted, and shift-synchronized with other actions at the obstacle

FM 90-13-1, pg. 2-2, 4-3



BREACHING FUNDAMENTALS



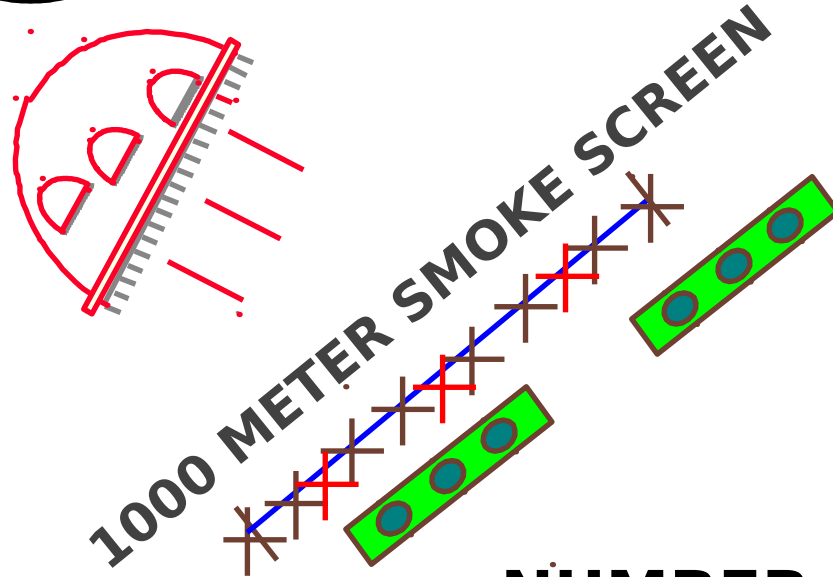
OBSCURATION

- ▲ **Obscuration hampers enemy observation and target acquisition and conceals friendly activities and movement**
- ▲ **Obscuration smoke deployed on or near the enemy position minimizes its vision**
- ▲ **Obscuration must be employed to protect obstacle reduction, passage of assault forces and deployment of forces in assault formations**
- ▲ **Smoke targets are fired simultaneously with suppressive fires so that the smoke builds before the breach and assault forces move forward**

FM 90-13-1, pg. 2-2, 3-2



OBSCURATION



- * NUMBER OF AIM POINTS TO BUILD
- +
- * NUMBER OF AIM POINTS TO SUSTA
- +
- * SHIFT TIME FROM FFE TO NEXT FF



BREACHING



WHEN TO FIRE? HOW LONG TO SUSTAIN?

*** TRIGGER**

*** RATE OF MARCH**

*** DURATION SMK & SUPPRESSION**

▲ SUPPRESS

▲ OBSCURE

WHO TRIGGERS?

*** SCOUTS/SUPPORT/BREACH FORCE**

*** ADJUST IF NECESSARY**

▲ SECURE

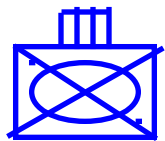
▲ REDUCE

*** WHEN TO LIFT OR SHIFT**

*** ACTIVATE AND REFINE CFZ**

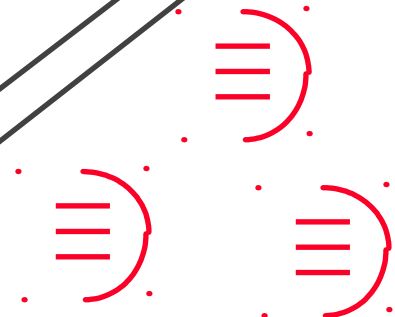
MUST REHEARSE?

MORTARS: CONSIDER IN STRONGPOINT & AT



5s

? MIN FOR SMOKE TO BUILD





ISOLATE THE NORTHERN MRP



SUPPRESS N. MRP

ENEMY DF RANGE

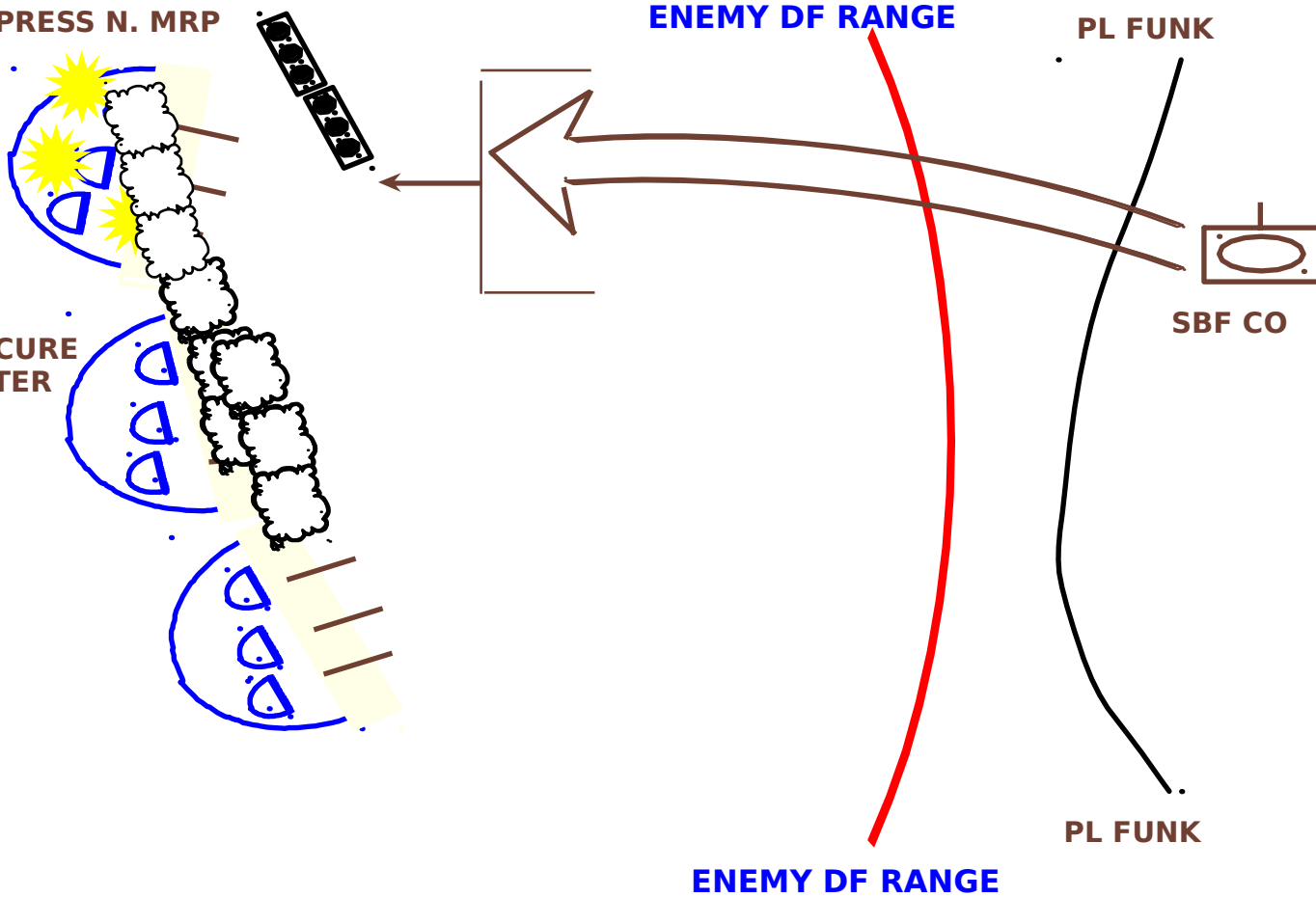
PL FUNK

OBSURE
CENTER
MRP

SBF CO

PL FUNK

ENEMY DF RANGE





SET CONDITIONS FOR THE BREACH FORCE



SUPPRESS &
OBSCURE
N. MRP

SHIFT
FIRES

OBSCURE &
SUPPRESS

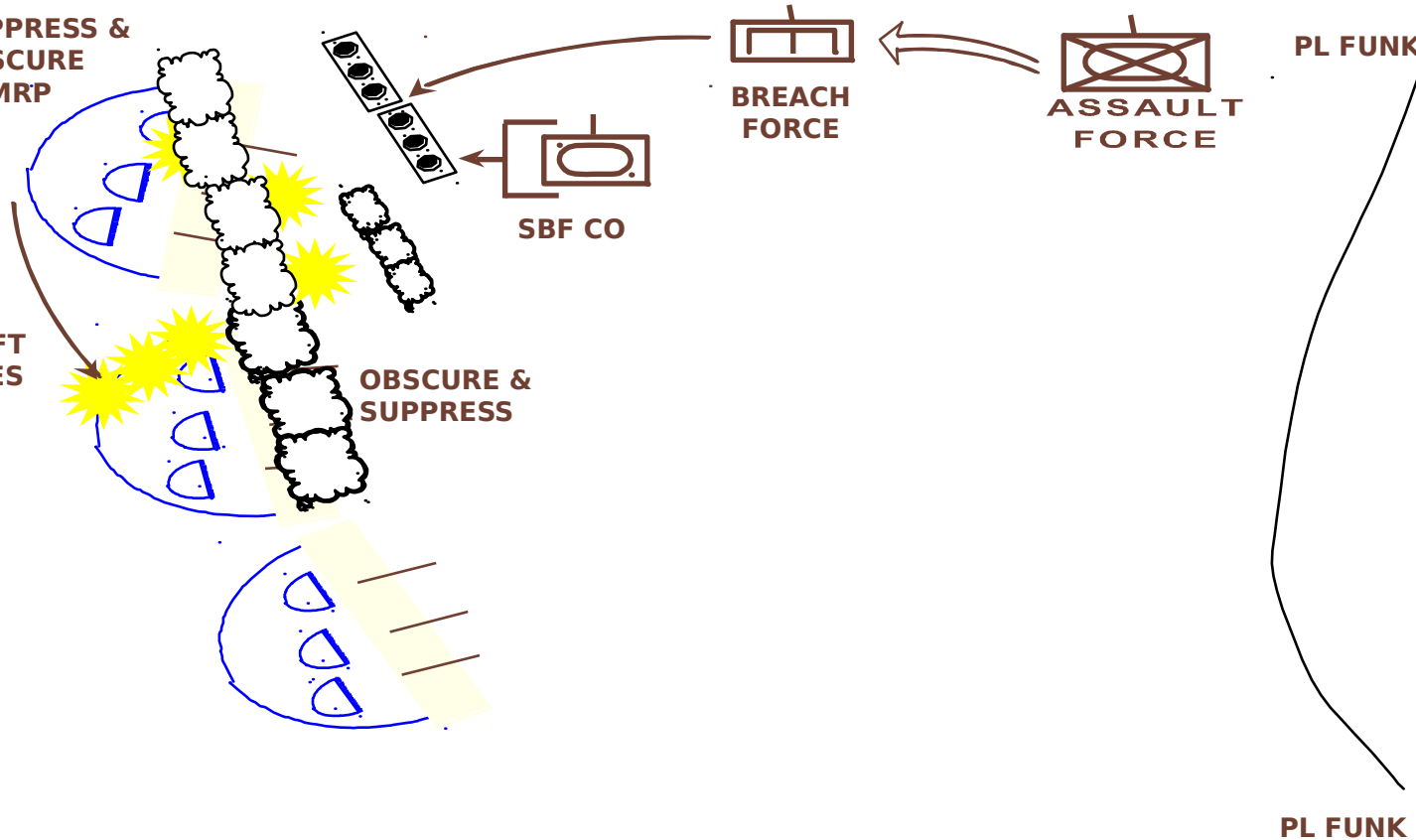
SBF CO

BREACH
FORCE

ASSAULT
FORCE

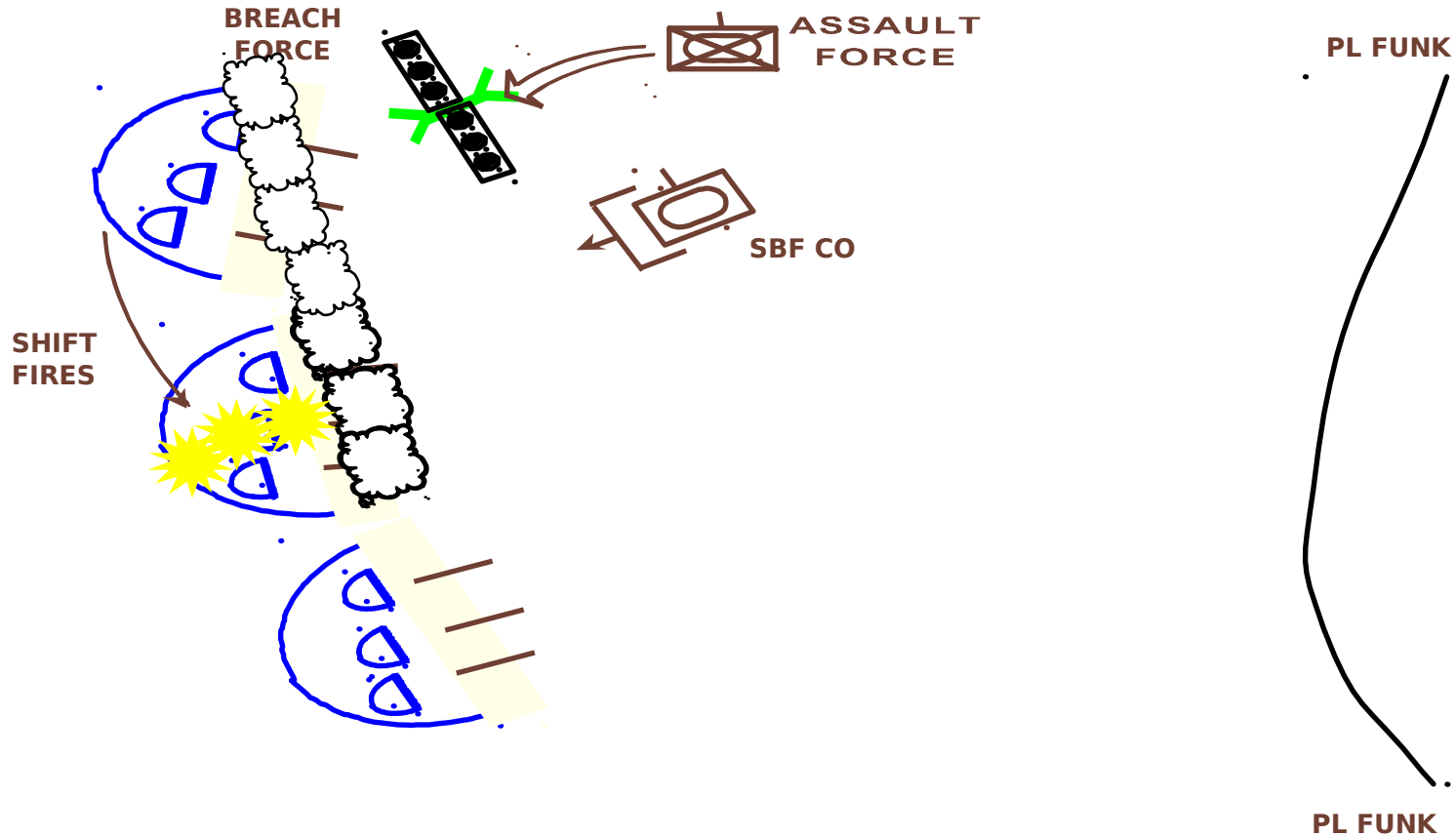
PL FUNK

PL FUNK



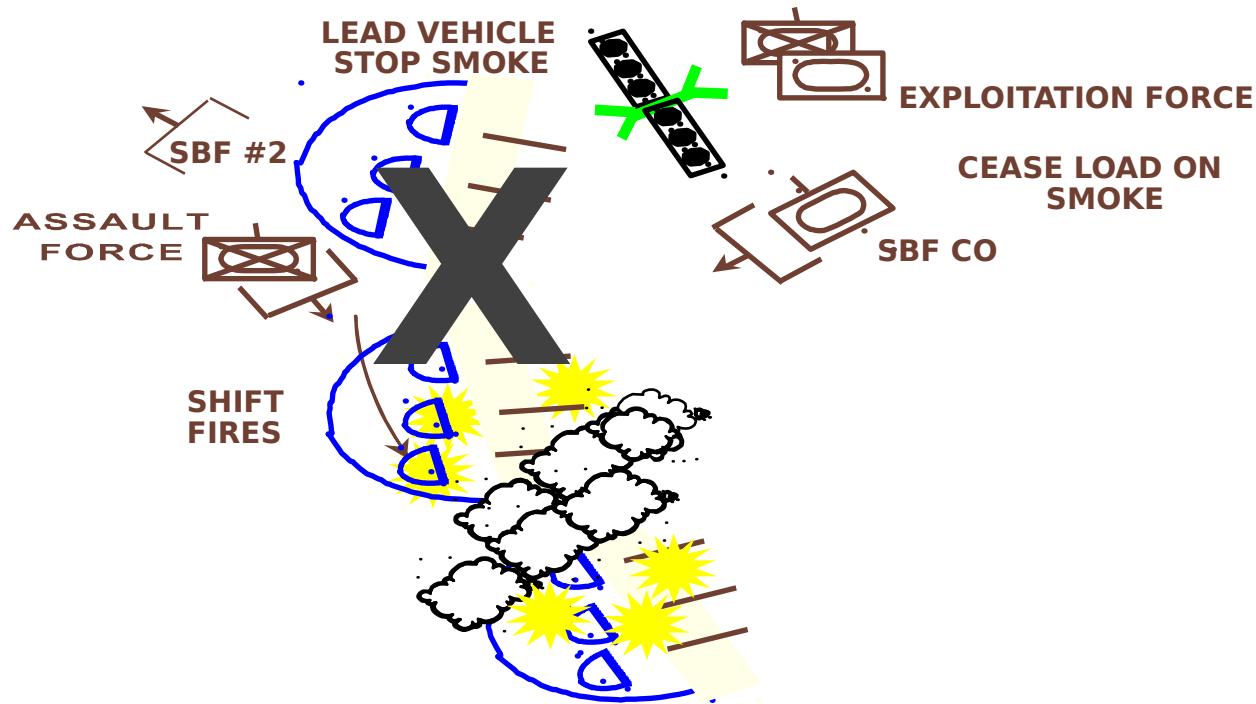


BREACH MADE THROUGH OBSTACLE





NORTHERN MRP DEFEATED



PL FUNK

PL FUNK



MOVEMENT TO CONTACT FS CONSIDERATIONS



- ▲ **PRIORITY OF FIRES TO THE SECURITY FORCE, THEN TO THE ADVANCE CO TM**
- ▲ **PUT THE MORTAR PLATOON IN DS TO THE ADVANCE GUARD CO TM**
- ▲ **ENSURE EFFECTIVE POSITIONING OF FISTs, FOs, AND COLTs.**
- ▲ **THE SCOUTS WILL MOST LIKELY HAVE THE BEST VIEW OF THE ENEMY. ENSURE THEY HAVE THE ABILITY TO CALL FOR FIRE.**
- ▲ **PLAN TARGETS**
 - ◆ **ALONG ROUTE OF MARCH.**
 - ◆ **LIKELY ENGAGEMENT AREAS.**
 - ◆ **WHERE YOU EXPECT CONTACT**

FM 6-71,pg. 4-1



TARGETING PASSAGE OF LINES



- ◆ **PLAN SMOKE TO SCREEN FRIENDLY MOVEMENT THROUGH PASSAGE POINTS.**
- ◆ **PLAN FIRES TO INTERDICT ENEMY COUNTERATTACKS.**
- ◆ **THE STATIONARY FORCE SUPPORTS THE CLOSE BATTLE WHILE THE PASSING FORCE INDIRECT FIRE ASSETS MOVE THROUGH.**
- ◆ **PLAN COUNTERFIRES.**
- ◆ **POSITION COLT/FIST OF BOTH FORCES TO DESIGNATE TARGETS.**
- ◆ **PLAN FIRE SUPPORT COORDINATING MEASURES.**
- ◆ **PASSING FORCE MUST PLAN FIRES TO SUPPORT OPERATIONS AFTER THE PASSAGE OF LINES.**



FIRE SUPPORT COORDINATION MEASURES



- ▲ **Essential for the clearance of fires**
- ▲ **Post, update, and disseminate all FSCMs**
- ▲ **Consider maneuver graphic control measures**
 - ◆ **CFL**
 - ◆ **FSCL**
 - ◆ **RFL**
 - ◆ **NFA**
 - ◆ **RFA**
 - ◆ **FFA**
 - ◆ **ACA**



CLEARANCE OF FIRES



***THE PROCESS OF
APPROVING OR ATTACKING
TARGETS WITH INDIRECT
FIRES BOTH WITHIN AND
OUTSIDE THE BOUNDARIES
OF THE MANEUVER UNIT
FOR WHICH THE FIRES ARE
APPROVED***



CLEARANCE OF FIRES



“The maneuver commander has the final authority to approve (clear) fires and their effects within his zone.”

pg. 2-20

FM 6-40,



WHO CLEARS FIRES?



- ▲ **COMBINED ARMS COMMANDERS**
- ▲ **THE FSO & FSE PROCESSING THE CFF**
 - ◆ **OBTAINS INTERNAL CLEARANCE**
 - ◆ **OBTAINS CLEARANCE FROM ADJACENT UNITS, IN WHOSE AREA THE TARGET LIES.**
 - ◆ **THE FSO/FSE ACTS AS THE MVR CDR'S AGENT FOR CLEARANCE OF FIRES**
- ▲ **CLEARANCE IS NOT LIMITED TO CLOSE FIRES**
- ▲ **CLEAR FIRES TO PREVENT:**
 - ◆ **FRATRICIDE OF FRIENDLY UNITS.**
 - ◆ **FACILITATE RESPONSIVENESS**



POSITIVE CLEARANCE



- ▲ **REQUIRES VERBAL OR AUTOMATED RESPONSE FROM THE SUPPORTED UNIT BEFORE FIRING**
- ▲ **MAXIMIZES TROOP SAFETY**
- ▲ **FSCMs & MVR CONTROL MEASURES ESSENTIAL**
- ▲ **MAY SLOW RESPONSIVENESS**
- ▲ **DEPENDENT ON COMMUNICATIONS**
- ▲ **PREVENTS FRATRICIDE INCIDENTS**
- ▲ **REQUIRES A BATTLE DRILL ON MVR CMD & FS NETS**
- ▲ **BATTLE DRILL ESTABLISHED IN TSOP**
- ▲ **REQUIRES REHEARSAL TO MAINTAIN RESPONSIVENESS**



CLEARING FIRES "A WAY"



- ▲ **MTCs ONLY THE LEAD CO/TM MAY INITIATE MISSIONS WITHOUT SPECIFIC APPROVAL FROM THE TASK FORCE COMMANDER.**
- ▲ **DEFENSIVE OPERATIONS, FSOs WORK CLOSELY WITH MANEUVER COMMANDERS TO DEFINE PRECISELY DESIGNATED BATTLE POSITIONS AND ALLOW FIRES ANYWHERE OUTSIDE THE BATTLE POSITIONS.**
- ▲ **OFFENSIVE OPERATIONS, THE COMMANDER CAN DIVIDE HIS AREA USING SUBORDINATE UNIT BOUNDARIES, REQUIRING POSITIVE CLEARANCE FROM THE UNIT COMMANDER TO FIRE INTO HIS AREA.**



TF Rehearsal - FS Script



- ▲ **Scheme of Fires (logical sequence of FS events in concert w/scheme of maneuver)**
 - **Event (target, CFZ)**
 - **Trigger (execution, lift, shift, limited vis)**
 - **EFST (TPME-FA, mortar, CAS, CFZ)**
 - **Observer (pri, alt, OP, movement, security)**
 - **Assess (purpose achieved?)**
- ▲ **Co TM Cdrs & FSOs execute assigned responsibilities (use call for fire format)**



TF Rehearsal - FS Script



▲ Mortar Platoon

- standard tactical mission (DS, GS)
- task and purpose (EFSTs)
- employment (platoon/split section)
- movement
- positioning
- MET
- survey
- registration



TF Rehearsal - FS Script



- ▲ **Priority of Fires (FA, mortars)**
- ▲ **FSCMs (CFL, RFL, ACA, NFA, TF boundaries)**
- ▲ **Clearance of fires battle drill**
- ▲ **Primary and alternate nets**
- ▲ **TF & Co FSO jump plans**
- ▲ **Integrate Scouts**
- ▲ **Adjust Fire - Maneuver Shooters & non-lased tgts**



REHEARSAL OUTCOME



- ▲ **ENSURES UNDERSTANDING.**
- ▲ **SYNCHRONIZES FIRES WITH THE SCHEME OF MANEUVER PLAN.**
- ▲ **EXERCISES PRIMARY AND ALTERNATE OBSERVERS**
- ▲ **ENSURE REDUNDANT EYES & ATTACK SYSTEMS.**
- ▲ **IMPROVES RESPONSIVENESS OF FIRES**
- ▲ **VERIFIES TARGET TRIGGERING RESPONSIBILITY**
- ▲ **VALIDATES PLAN**



FIRE SUPPORT TOOLS



• 155 MM HOWITZER

- ▲ RANGE: 30,000 METERS
- ▲ MUNITIONS: HE, DPICM, RAP, WP, SMK, ILL, FASCAM, CPHD
- ▲ RATE OF FIRE (SUST / MAX): 1 RPM / 4 RPM
- ▲ EFFECTS: 18 RDs (DP)=1 BMP

▲ 120 MM MORTAR

- ▲ RANGE: 7,200 METERS
- ▲ MUNITIONS: HE, ILL, WP
- ▲ RATE OF FIRE (SUST / MAX): 4 RPM / 15 RPM
- ▲ EFFECTS: 90 RDs (HE)=1 BMP



MORTAR PLATOON



▲ **Command Relationship**

- ◆ **OPCON**
- ◆ **Attached**

▲ **Support Relationship** (standard tactical mission)

- ◆ **General Support**
 - **Priority Fires**
 - **Priority Targets**
- ◆ **Direct Support**

FM 7-90



MORTAR PLATOON



Planning/Prep Considerations

- ▲ **Mortar Platoon Leader must participate in the TF planning process**
- ▲ **Assign Task & Purpose/EFSTs**
- ▲ **Assign appropriate command or support relationship**
- ▲ **Select employment option (platoon vs split section)**
- ▲ **Support R&S/counter recon**
- ▲ **Movement/Positioning/Direction of Fire**
- ▲ **Target list**



MORTAR PLATOON



Planning/Prep Considerations

- ▲ **FSCMs**
- ▲ **Overhead fire restrictions**
- ▲ **MET data**
- ▲ **Censor zone or NFA**
- ▲ **Survey support in Defense**
- ▲ **Registration**
- ▲ **Standard fire order**
- ▲ **CL V resupply**



120 MM MORTAR CAPABILITIES



- ▲ **MIN RANGE: 200 METERS**
- ▲ **MAX RANGE: 7,200 METERS**
- ▲ **MAX FPF WIDTH: 360 METERS /
6TUBES, 180
METERS / 3 TUBES**
- ▲ **MUNITIONS: HE, ILL, WP**
- ▲ **RATE OF FIRE (SUST / MAX): 4 RPM
/ 15 RPM**



107MM MORTAR CAPABILITIES



- ▲ **MIN RANGE: 770 METERS**
- ▲ **MAX RANGE: 6,849 METERS**
- ▲ **MAX FPF WIDTH: 240 METERS / 6 TUBES**
120 METERS / 3 TUBES
- ▲ **MUNITIONS: HE, ILL, WP**
- ▲ **RATE OF FIRE (SUST / MAX): 3 RPM / 18 RPM**



COPPERHEAD ENGAGEMENT



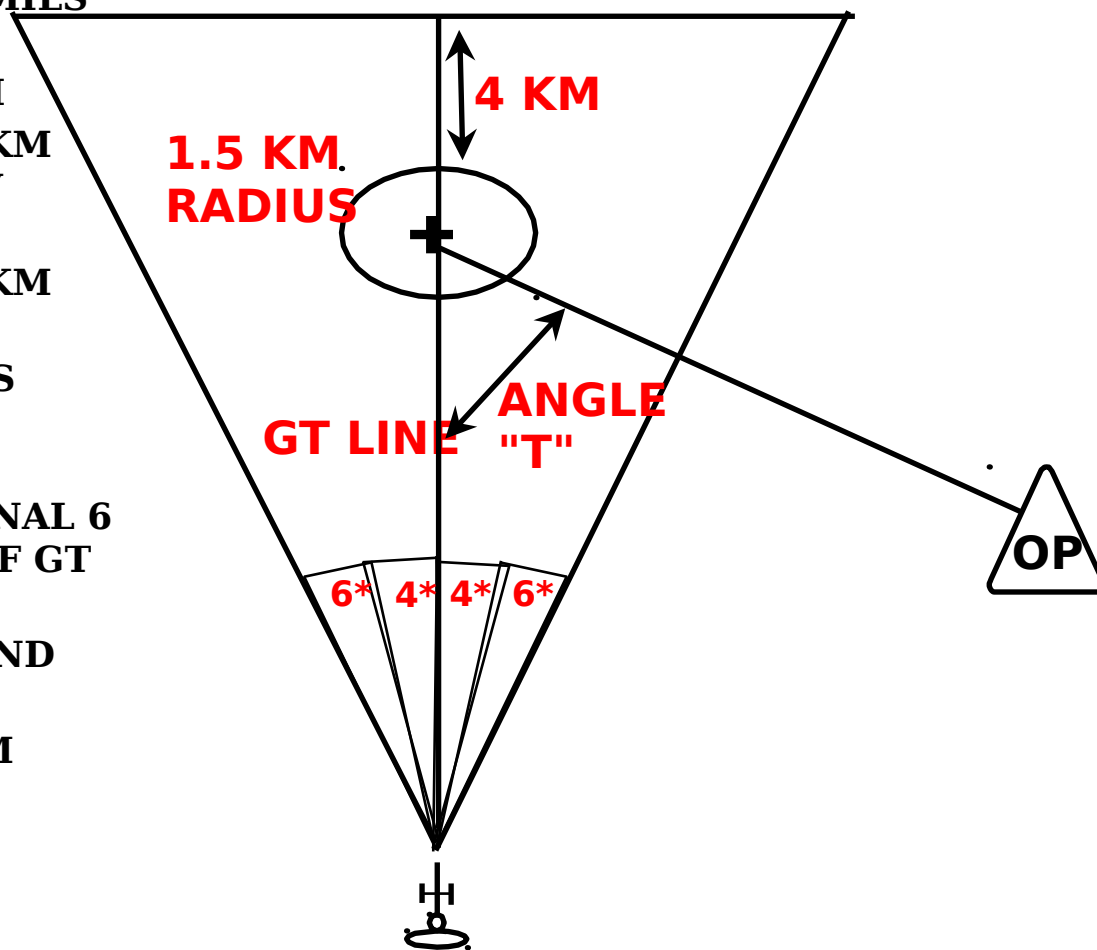
- ▲ **"ANGLE-T" LESS THAN 800 MILs.**
- ▲ **G / LVVD DESIGNATES LASTS 13 SECONDS TOF**
- ▲ **OBSERVER-TO-TARGET MAX DISTANCE**
 - ◆ **MOVING TARGETS 3-4 KM.**
 - ◆ **STATIONARY TARGETS 5 KM.**
- ▲ **MINIMUM VISIBILITY 5 KM.**
- ▲ **SAME PRF CODES ON G / LVVD AND COPPERHEAD ROUND**
- ▲ **TARGET WITHIN FOOTPRINT**
- ▲ **FDC HAS CORRECT OBSERVER LOCATION**
- ▲ **G / LVVD OPERATIONAL.**
- ▲ **REHEARSE ENGAGEMENT (OBSERVER / FDC).**



COPPERHEAD REQUIREMEN TS



- ▲ ANGLE "T" LESS THAN 800 MILS
- ▲ PRF CODES ON LASER AND COPPERHEAD MUST MATCH
- ▲ OBSERVER TO TARGET -- 5 KM DISTANCE FOR STATIONARY TARGET
- ▲ OBSERVER TO TARGET -- 3 KM FOR MOVING TARGET
- ▲ NO ONE IN AREA 4 DEGREES LEFT OR RIGHT OF GT LINE
- ▲ MISSION ESSENTIAL PERSONNEL ONLY ADDITIONAL 6 DEGREES LEFT OR RIGHT OF GT LINE
- ▲ 1.5 KM SAFETY ZONE AROUND TARGET
- ▲ NO ONE CLOSER THAN 4 KM BEYOND TARGET





FASCAM CONSIDERATION S



- ▲ **WHAT ARE OUR COUNTERMOBILITY NEEDS: TASK & PURPOSE?**
- ▲ **ARTILLERY FASCAM CONSIDERATIONS**
 - ◆ **TIME TO PUT IN**
 - ◆ **TRIGGER FOR EMPLACING**
 - ◆ **BATTERY SHOULD REPOSITION AFTER FIRING**
- ▲ **FOR A TYPICAL 400 X 400 = 10 TARGETS (6 RAAMS, 4 ADAM AIMPOIINTS)**
- ▲ **AVERAGE EMPLACEMENT TIME 20-25 MIN**
- ▲ **FASCAM TARGET OF OPPORTUNITY IS NOT A SINGLE GRID. IT IS MULTIPLE TARGETS REQUIRING COMPUTATION**



FIREFINDER ZONES



- ▲ **Critical Friendly Zone (CFZ) is an area, usually in friendly territory, which the combined arms commander deems critical to achieving his mission.**
- ▲ **When the radar predicts that a round is going to impact inside a CFZ, the location of the weapon firing into the CFZ is immediately generated as a priority 1 call for fire**
- ▲ **Each firefinder radar can have up to 9 zones active at one time**



CRITICAL FRIENDLY ZONE MISCONCEPTIONS



- ▲ **PROVIDES ABSOLUTE FORCE PROTECTION , I., E., RADAR STAYS ON / CUED ALL THE TIME, RESPONSIVE COUNTER IS ALWAYS INITIATED WHEN ACQUISITION IS GENERATED, AND THERE IS NO RISK WHEN A CFZ IS IN EFFECT**
- ▲ **CFZs ARE USED TO PROTECT THE ENTIRE MOVEMENT ROUTE FOR IDENTIFIED CRITICAL UNITS**
- ▲ **BOTTOM LINE: A CFZ DOES MORE THAN GENERATE A FM:CFF (PRIORITY 1) TO INITIATE RESPONSIVE COUNTERFIRE**



ZONE LIMITATIONS



- ▲ **ENTER ONLY UP TO 9 ZONES. ONE TYPE OR ANY COMBINATION.**
- ▲ **A RADAR ZONE CANNOT INTERSECT OR TOUCH ANOTHER ZONE.**
- ▲ **DEFINE ZONES BY A MINIMUM OF 3 OR A MAXIMUM OF 6 GRID COORDINATES.**
- ▲ **NO MORE THAN 2 ZONES CAN BE ALONG THE SAME AZIMUTH, EXCEPT A CFZ AROUND THE RADAR ITSELF.**
- ▲ **AN AZIMUTH SHOULD NOT INTERSECT THE BOUNDARY OF A ZONE MORE THAN 2 TIMES.**
- ▲ **LIST AND ENTER GRID COORDINATES SEQUENTIALLY (CLOCKWISE).**



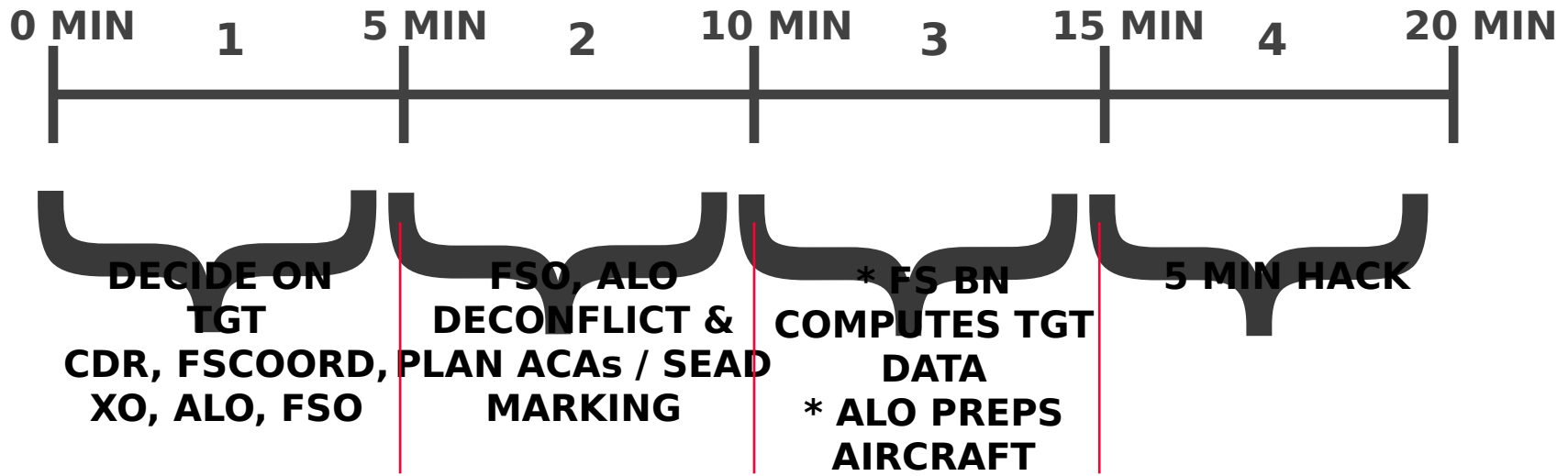
ARTILLERY / CAS DECONFLICTION



- ▲ LATERAL SEPARATION
- ▲ TIME SEPARATION
- ▲ ALTITUDE SEPARATION
- ▲ COMBINATION



TIME TO ATTACK WITH CAS



- 1 & 2. FORMAL PROCESS ON DECISION WILL REDUCE TIME - SOP.
3. DEDICATED / PLANNED SEAD SHOOTER - SPEEDS PROCESSING.
4. CAN NOT REALLY REDUCE.



COMPANY/TROOP FS PLANNING



Like BDE and TF fire support planning, FS planning at company / team must mirror the planning process maneuver uses. For the company the process is Troop Leading Procedures (TLPs)



COMPANY/TROOP FS PLANNING



RECEIVE THE MISSION

- Assets available, allocation, and FSCM's
- Identify specified and implied FS tasks
- Receive commanders restated mission
- Receive the commanders guidance for FS



COMPANY/TROOP FS PLANNING



ISSUE THE WARNING ORDER

- Participate in company warning order
- Issue warning order to FO's and mortar section leader as applicable



COMPANY/TROOP FS PLANNING



MAKE A TENTATIVE PLAN

- Attach operations overlay to map
- Plot Bn targets
- List specified and implied tasks for fires
- Advise commander if guidance can or cannot be met with assets available
- Refine targets if necessary
- Determine if Bn targets account for any of commanders guidance



COMPANY/TROOP FS PLANNING



INITIATE MOVEMENT

- Always insure battlefield observation is maintained
- Coordinate gain/loss of forward observers due to task organization



COMPANY/TROOP FS PLANNING



MAKE A TENTATIVE PLAN (CONTINUED)

- Plot new company targets to meet commanders intent (if allocated)
- Determine task, purpose, method, and endstate for each new company target
- Determine primary and alternate shooters
- Develop triggers
- Develop target list worksheet and execution matrix



COMPANY/TROOP FS PLANNING



CONDUCT RECON

- Always accompany maneuver leaders on RECON
- Confirm or deny plan
- Verify target locations, trigger points, and observation plan



COMPANY/TROOP FS PLANNING



COMPLETE THE PLAN

- Modify plan as necessary after RECON
- Brief commander on FS plan
- Emphasize observer movement, and OP requirements
- Receive approval for scheme of fires
- Transmit new company targets to FCF



COMPANY/TROOP FS PLANNING



ISSUE THE OPERATIONS ORDER

- Participate in company OPORD
- Brief BN and company level FS plan
- Ensure FO's and mortar section leader attends OPORD as applicable



COMPANY/TROOP FS PLANNING



SUPERVISE

- Participate in BDE and TF fire support rehearsals
- Conduct PCC/PCI's
- Continue to refine targets and triggers, actual obstacle emplacement, and new enemy information
- Continuously update and coordinate plan as necessary both higher and



TIME MANAGEMENT TOOLS



**1/3-2/3
RULE**

**BACKWARD
PLANNING**

**PRIORITIES OF
WORK**

**TIMELIN
E**



PRE-COMBAT CHECKS



- ▲ **OPERATIONAL CHECKLIST/MEMORY CUE.**
- ▲ **PART OF UNIT TSOP.**
- ▲ **REPORT TO SENIOR LEADER WHEN COMPLETE.**
- ▲ **REPORT HALFWAY THROUGH PREPARATION TO GAUGE PROGRESS AND REDIRECT PRIORITY OF TASKS IF NEEDED.**
- ▲ **ESSENTIAL PRE-BATTLE CHECKS.**



PRE-COMBAT INSPECTIONS



- ▲ **SENIOR LEADERS WALK-THROUGH.**
- ▲ **VERIFY HOW WELL DID THE PRE-COMBAT CHECKS.**
- ▲ **IS NOT A FORMAL INSPECTION.**
- ▲ **GAUGES COMBAT PREPARATION PROGRESS.**
- ▲ **REDIRECTS PRIORITY OF TASKS.**
- ▲ **TALK WITH SOLDIERS TO CHECK IF INFORMATION IS DISSEMINATING TO ALL.**
- ▲ **CORRECT DEFICIENCIES FOUND.**
- ▲ **BRING DEFICIENCIES TO THE ATTENTION OF THE LEADER IN CHARGE AND MAKE HIM FIX IT.**



FIST CREW/BATTLE DRILLS



SLOCToP

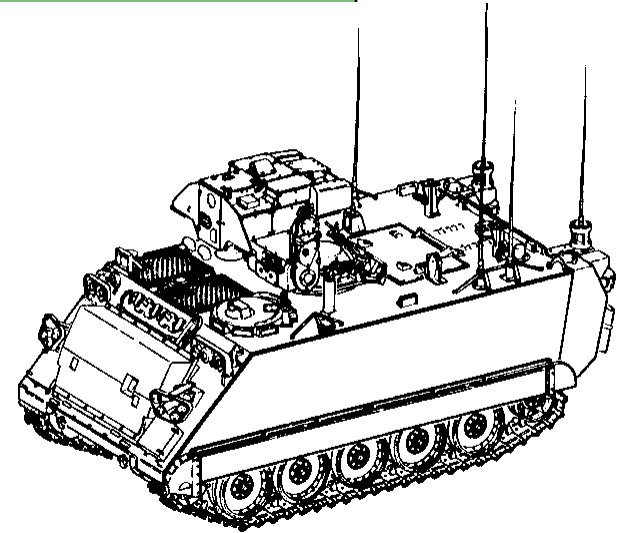
- Security
- Location
- Observation
- Communication
- Targeting Station
- Position Improvement



FIST REPORTING PROCEDURES



- **Fist Report**
- **Shell Report**
- **SALUTE/SALT Report**
- **NBC1 Report**
- **Unit TSOP Reports**



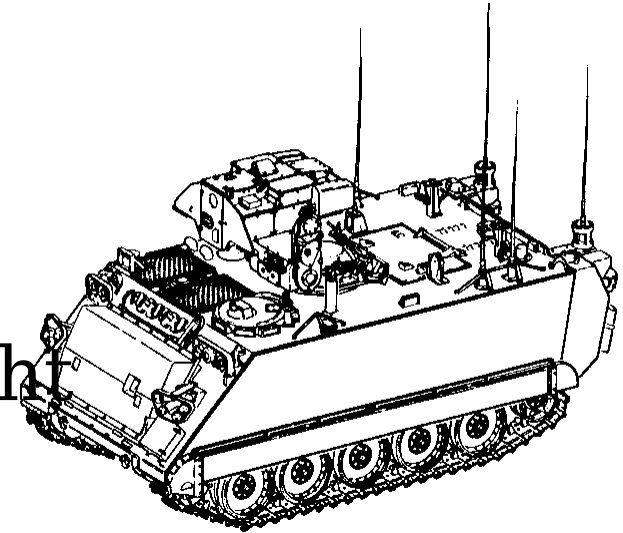
Ref: FM 6-20-



FIST REPORT



- Observer Identification
- Date-Time group (DTG)
- Location and altitude
- Visibility and cloud height
- G/VLLD code
- FPF's
- Current status



Ref: FM 6-20-

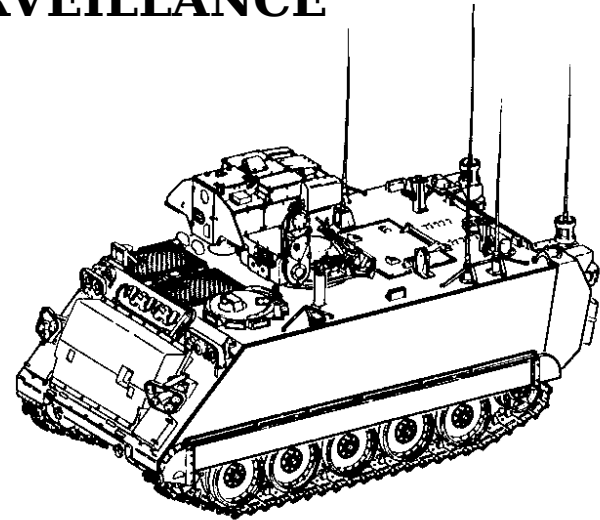
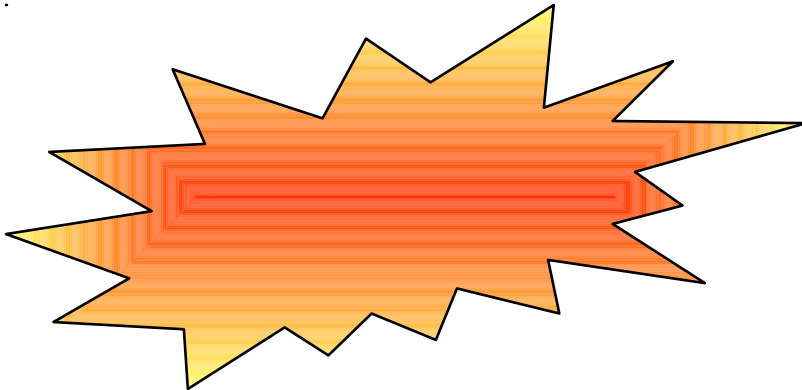


CALL FOR FIRE



- ▲ **OBSERVER ID**
- ▲ **WARNING ORDER**
- ▲ **TARGET LOCATION**
- ▲ **TARGET DESCRIPTION**
- ▲ **METHOD OF ENGAGEMENT**
- ▲ **METHOD OF FIRE AND CONTROL**

- ◆ **SEND IN 3 TRANSMISSIONS**
- ◆ **MESSAGE TO OBSERVER**
- ◆ **SUBSEQUENT CORRECTIONS**
- ◆ **REFINEMENT & SURVEILLANCE**





SHELL REPORT



- ▲ **Unit or origin**
- ▲ **Position of observer**
- ▲ **Azimuth of flash, sound, or groove**
- ▲ **Time from**
- ▲ **Time to**
- ▲ **Area affected**
- ▲ **Number & nature of guns**
- ▲ **Nature of fire**
- ▲ **Number, type, & caliber**
- ▲ **Flash-to-bang time**
- ▲ **Damage**

Ref: FM 6-20-



SALUTE / SALT REPORT



▲ Size

▲ Activity

▲ Location

▲ Unit

▲ Time

▲ Equipment

▲ Activity

▲ Location

▲ Time



FS CONSIDERATIONS FOR AASLT OPERATIONS



- ▲ **BASE ON THE GROUND TACTICAL PLAN.**
- ▲ **PLAN FS IN & AROUND EACH LANDING ZONE.**
- ▲ **CONSIDER HAVING MORTAR & ARTILLERY ON EARLY LIFTS TO SUPPORT LATER LIFTS.**
- ▲ **CONSIDER FALSE INDIRECT FIRE PREPARATIONS TO DECEIVE ENEMY ON LZ / OBJECTIVE LOCATION.**
- ▲ **LONG DURATION PREPs REDUCE POSSIBILITY OF SURPRISE.**
- ▲ **CONSIDER CAS & ATK HELO FOR INITIAL PREPs.**
- ▲ **TARGET KNOWN / SUSPECTED ENEMY LOCATIONS REGARDLESS OF THEIR SIZE.**
- ▲ **SCHEDULE LIFT / SHIFT TO COINCIDE W/ AC ARRIVAL TIMES.**
- ▲ **ESTABLISH POSITIVE CONTROL MEASURES TO LIFT / SHIFT FIRES.**



FS CONSIDERATIONS FOR AASLT OPERATIONS



- ▲ ALLOW THE FSO TO TRAVEL WITH THE AASLT TF CDR TO EXPEDITE FIRES AND CHANGES TO PREPLANNED FIRES.
- ▲ KEEP THE FSO INFORMED ABOUT THE FLIGHT STATUSES IN ORDER TO COORDINATE FOR FIRE SUPPORT.
- ▲ THE FSO REQUIRES A DEDICATED FIRE DIRECTION NET.
- ▲ THE FSO CONTROLS THE LIFTING & SHIFTING OF SEAD.
- ▲ THE FSO MUST CONSIDER DISPLACEMENT.
- ▲ DISPLACEMENTS MUST OCCUR BY ECHELON.
- ▲ DISPLACEMENTS OF FA UNITS REQUIRE CARGO HELOs IF PRIME MOVERS ARE NOT AT THE LZs.
- ▲ AMMUNITION RESUPPLY OCCURS BY AIR.
- ▲ MAKE AVAILABLE SUPPORTING TOWED ARTILLERY (M198 / M119).



FS ENHANCES AASLT WHEN



- ▲ DESTROYS, SUPPRESSES, & NEUTRALIZES TARGETS.
- ▲ OBSCURES THE ENEMY'S VISION.
- ▲ ISOLATES ENEMY FORMATIONS AND POSITIONS.
- ▲ SLOWS AND CANALIZES ENEMY MOVEMENT.
- ▲ KILLS & DISABLES THE ENEMY AT RANGES > DIRECT FIRE RANGES.
- ▲ USES SMOKE TO SCREEN OR TO CREATE AN OBSTACLE AREA.
- ▲ REDUCES THE EFFECTS OF ENEMY ARTILLERY BY COUNTERFIRES.
- ▲ INTERDICTS ENEMY FOLLOW-ON ECHELONS.
- ▲ PROVIDES ILLUMINATION.
- ▲ PROVIDES SEAD.



AASLT FIRE SUPPORT PLANNING



- ▲ **DEPTH AND DETAIL OF PLANNING DEPENDS ON TIME AVAILABLE.**
- ▲ **IS CONTINUOUS AND CONCURRENT AT ALL LEVELS.**
- ▲ **OUTLINES HOW FIRE SUPPORT ASSETS WILL COMPLEMENT SCHEME OF MANEUVER.**
- ▲ **ALLOWS QUICK EXECUTION OF TARGETS.**



AASLT PLAN MUST INCLUDE



- ▲ DETAILED CONCEPT OF HOW FIRES SUPPORT THE AASLT OPERATION.
- ▲ TARGET LIST INCLUDES LOCATION WHERE FIRES WILL BE USED.
- ▲ PRIORITY OF FIRES BY PHASE.
- ▲ TARGET ATTACK PRIORITIES BY PHASE.
- ▲ ALLOCATION OF PRIORITY TARGETS BY PHASE.
- ▲ FIRING SCHEDULES.
- ▲ INFORMAL AIRSPACE COORDINATION MEASURES.
- ▲ COORDINATION MEASURES FOR TROOP SAFETY AND FS SYNCHRONIZATION.



FORCE ON FORCE ROE



▲ Firemarking

- ◆ **HE/DPICM: arty pyro airburst, groundburst, & HC smoke grenade**
- ◆ **Smoke: < 15 min smoke grenade, 15-30 min smoke pot, > 30 min smoke generator**
- ◆ **FASCAM: yellow smoke & 5 arty groundburst, 4 corners barber poles with orange flags, 2 airbursts when each barber pole is emplaced**
- ◆ **Casualty Assessment: Simulated Area Weapons Effect (SAWE)**

▲ OC coverage required for copperhead engagements



LIVEFIRE - ROE



- ▲ **MSL 1000 m, 1200 m high angle, mortars 120/107 1000m**
- ▲ **NFA radius: 1000 m personnel, 750 m equip**
- ▲ **Red Direct for lasing, TF requests from Bde**
- ▲ **OC must be present during lasing**
- ▲ **HGSS use unauthorized by FISTs during livefire unless approved by Dragon 07**
- ▲ **Casualty Assessment: Combination of ballistic and casualty assessment tables in ROE**
- ▲ **Mortars no 120/17mm no overhead fires 25 degrees left or right of the GT line out to 800/500 left or right of GT line**



OBSERVED FIRE TRAINING



▲ RSOI-3

- ◆ HGSS, G/VLLD, & FIST-V EQUIPMENT READINESS INSPECTIONS & PCC
- ◆ 1300-1700 IN THE DUST BOWL

▲ RSOI-4

- ◆ 0800-1300, GRID NK353087
- ◆ OCCUPY TACTICALLY
- ◆ YOUR TRAINING MOI IS A GUIDELINE -- NEED YOUR TRAINING OBJECTIVES, POC IS BRONCO 27, DSN: 4705546
- ◆ NTC RESOURCES: FIREMARKERS, SMOKERS, SAWE, & OBSERVER/CONTROLLERS
- ◆ YOU PROVIDE: MANEUVER SHOOTERS, ALL FISTs & COLTS, FDCs, 2 X HOWITZERS, & 3 OPERATIONAL VEHICLES WITH MILES
- ◆ WE DEMONSTRATE: FASCAM, EFFECTS, SMOKE GENERATORS, SMOKE POTS, & METHOD TO ANNOUNCE "SPLASH"



OBSERVED FIRE TRAINING CONCEPT SKETCH



LINKUP: 0730
START: 0800
FINISH: 1200

TGT 2
NK363130

VEH W/
MILES

TGT 3
NK390170

VEH W/
MILES

VEH W/
MILES

TGT 1
NK320102

TGT 4
VEH W/
MILES

EQUIPMENT:

- * FIST/COLTS EQUIP'D FOR MTD/DISMOUNTED OPNS
- * 1 M1 OR M2 PER TF STATION
- * MAPS, COMPASS, OF FANS, ETC.
- * 3 VEHs W/ MILES FOR TGT EFFECTS DEMO

MISSIONS PER STATION:

- * 2 AF POLAR, MNVR SHOOTERS
- * 2 AF GRID, SCTs/FISTs
- * 2 FFE (HGSS), COLTS/FISTs
- * 18 TOTAL MSNs 6 PER STATION

STATION 1
NK35240882

AR TF
-4 FIST
-SCOUT REP
-MNVR
SHOOTERS
(1 M1 OR M2)
-1 OC

STATION 2
NK35280866

COLTS
-6 TEAMS
-1 OC

STATION 3
NK35480874

MECH TF
-4 FIST
-SCOUT REP
-MNVR
SHOOTERS
(1 M1 OR M2)
-1 OC

BRIGADE HILL FDC

OCs
* 1 PER STATION
* 1 NCOIC/OIC

FIREMARKERS
* 1 PER TGT AREA



THE MAGNIFICENT SEVEN



- 1. COMMANDER'S GUIDANCE AND CONCEPT FOR FIRE SUPPORT.**
- 2. OBSERVERVATION PLAN AND TRIGGERS**
- 3. REHEARSALS.**
- 4. TARGETING / TARGET REFINEMENT / ZONE REFINEMENT.**
- 5. FSE / FIST OPERATIONS.**
- 6. CALL FOR FIRE**
- 7. MORTARS**



5 Rs OF SUCCESSFUL FIRE SUPPORT



- ▲ **REDUCE.. THE NUMBER OF TARGETS TO WHAT YOU
CAN RESOURCE**
- ▲ **RESOURCE.. TARGETS WITH PRIMARY / BACK-UP
OBSERVERS**
- ▲ **REFINE.. TARGET
LOCATIONS**
- ▲ **REHEARSE.. EACH TARGET WITH OBSERVERS AND
TRIGGERS**
- ▲ **REPEAT.. WITH ADJUSTED FIRES TO FINISH WHAT YOU
STARTED**



TSOPs

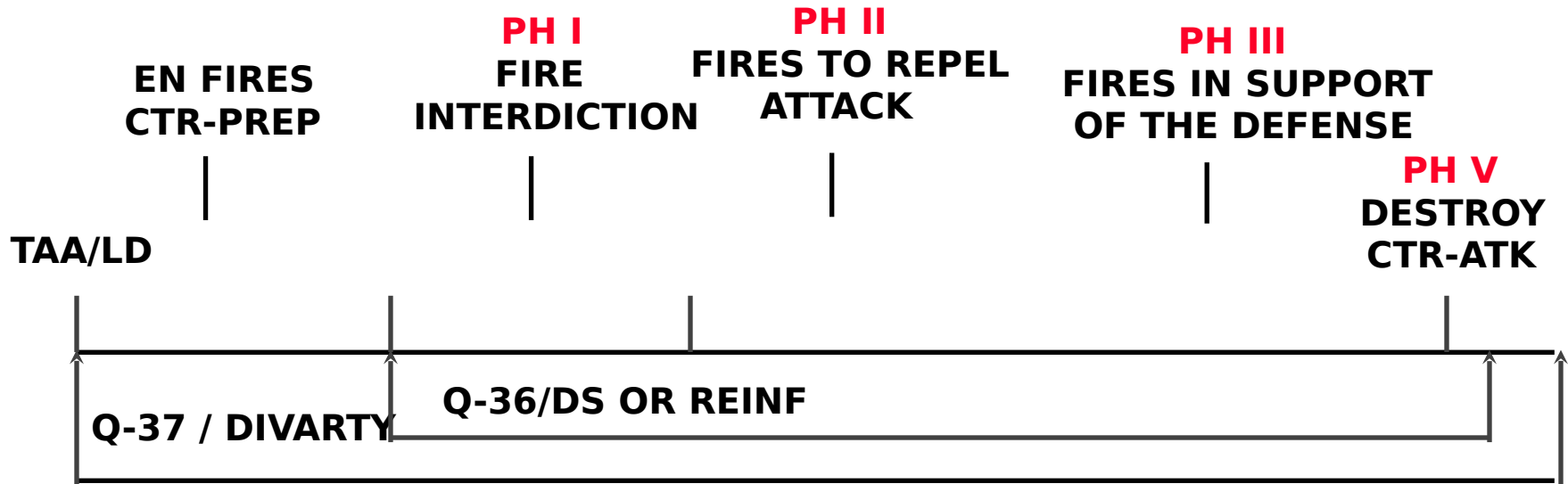


CONSIDERATIONS

- ▲ Top-down/Bottom-up refinement
- ▲ Working/living document
- ▲ Address Plan - Prep - Execute cycle
- ▲ Establish TTPs
- ▲ Use checklists
- ▲ Include all combat functions
- ▲ Reporting
- ▲ Rehearsals
- ▲ Degraded operations
- ▲ Practice/Validate/Update



ENEMY PHASES OF FIRE DEFENSE





ENEMY PHASES OF FIRE OFFENSE



- **Fire support for the movement forward**
 - Protects forces up to 20km from FEBA
 - Destroys or harasses wpns that can interfere w/ATK
- **Fire preparation for the attack**
 - Targets weapon systems in the tactical & immediate depth of the defense
- **Fire support for the attack**
 - Begins with deployment into MRB columns
- **Fire accompaniment**
 - Support commitment of 2d echelon
 - Targets reserves and counterattacks



MRR ATTACK FROM THE MARCH



- ▲ **COMBAT RECONNAISSANCE PATROLS (CRP)**
 - ◆ **1 TO 2 CRPs DETACHED FROM A 1ST ECHELON MRB.**
 - **RECON ROUTES OF MARCH FOR OBSTACLES AND PROVIDE EARLY WARNING TO PARENT MRB.**
 - **MAY ATTACK TO DESTROY A WEAK ENEMY FORCE.**
 - ◆ **MAIN EFFORT MISSION**
 - **BREACH OBSTACLES USING MSD AND TDA-M SMOKERS FOR OBSCURATION.**
 - **DESTROY ENEMY AT THE POINT OF PENETRATION WITH DIRECT FIRES AND PHASE III FIRES FROM THE ARTILLERY FROM THE RAG.**
 - **CREATE A SALIENT TO ALLOW 2D ECHELON FORCES TO PASS THROUGH.**
 - ◆ **SUPPORTING EFFORT MISSION.**
 - **ESTABLISH SUPPORT BY FIRE POSITIONS TO OVERWATCH MAIN EFFORT BREACHING OPERATIONS.**
 - **PREVENT THE LATERAL REPOSITIONING OF FORCES THROUGH THE USE OF FIRE AND MANEUVER.**



MRR ATTACK FROM THE MARCH (cont)

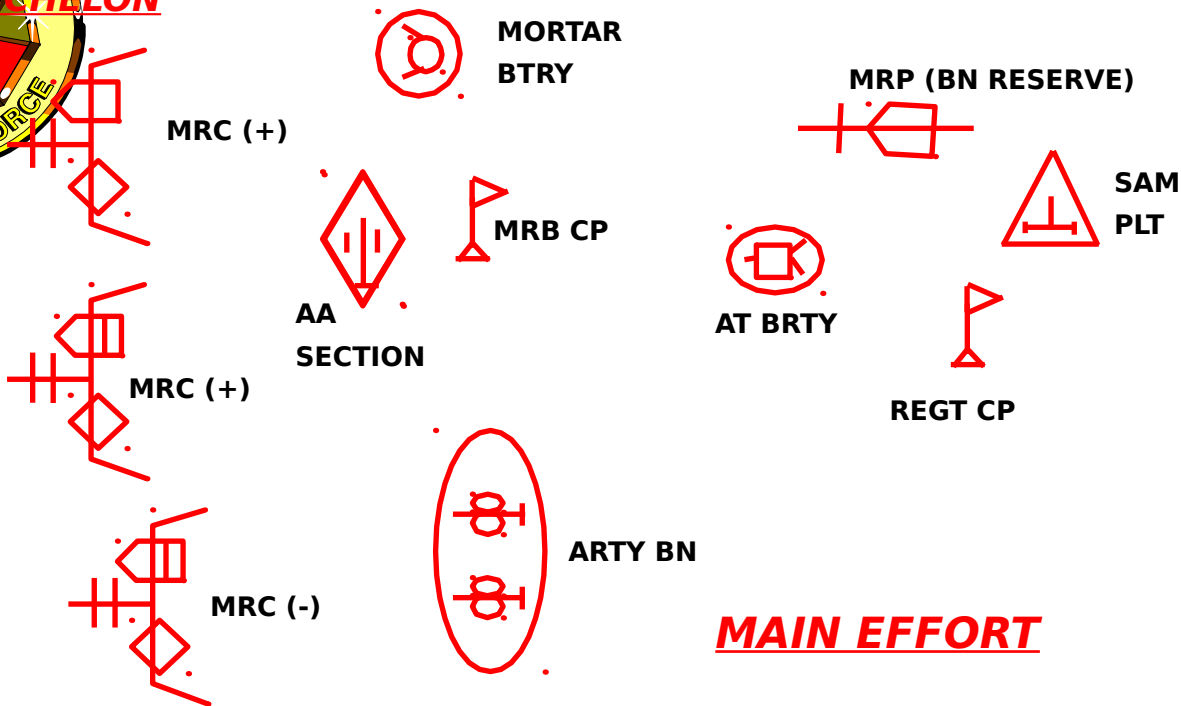


- ▲ **IF THE MRR COMMANDER USES AN ADVANCE GUARD MAIN BODY (AGMB), IT ASSUMES THE MISSION OF THE MAIN EFFORT, AND THE CRPs PROVIDE RECONNAISSANCE.**
- ▲ **THE FORWARD SECURITY ELEMENT (FSE) BREACHES AND ENGAGES THE ENEMY AT THE POINT OF PENETRATION.**
- ▲ **THE AGMB ESTABLISHES SUPPORT BY FIRE POSITIONS FOR THE FSE OR REINFORCES TO CREATE A SALIENT.**

MRR ATTACK FROM THE MARCH

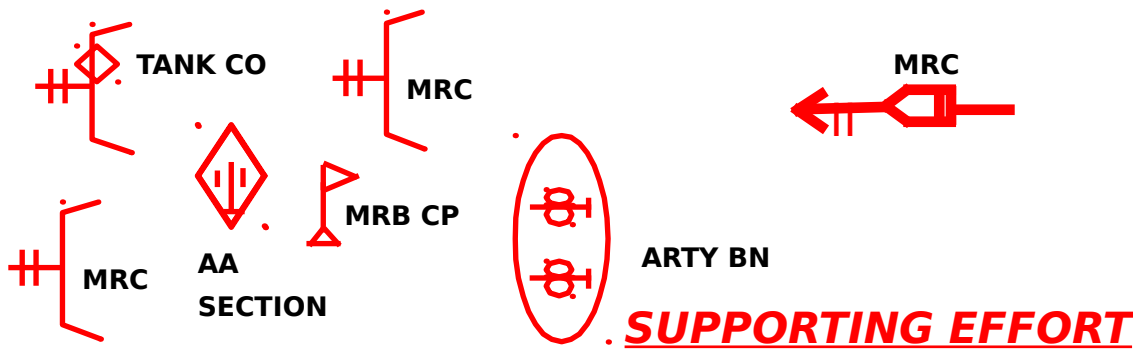


ZONE
OF
ATTACK

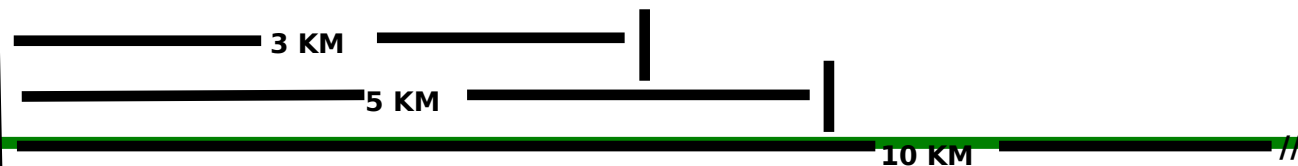


3-8 KM

MAIN EFFORT



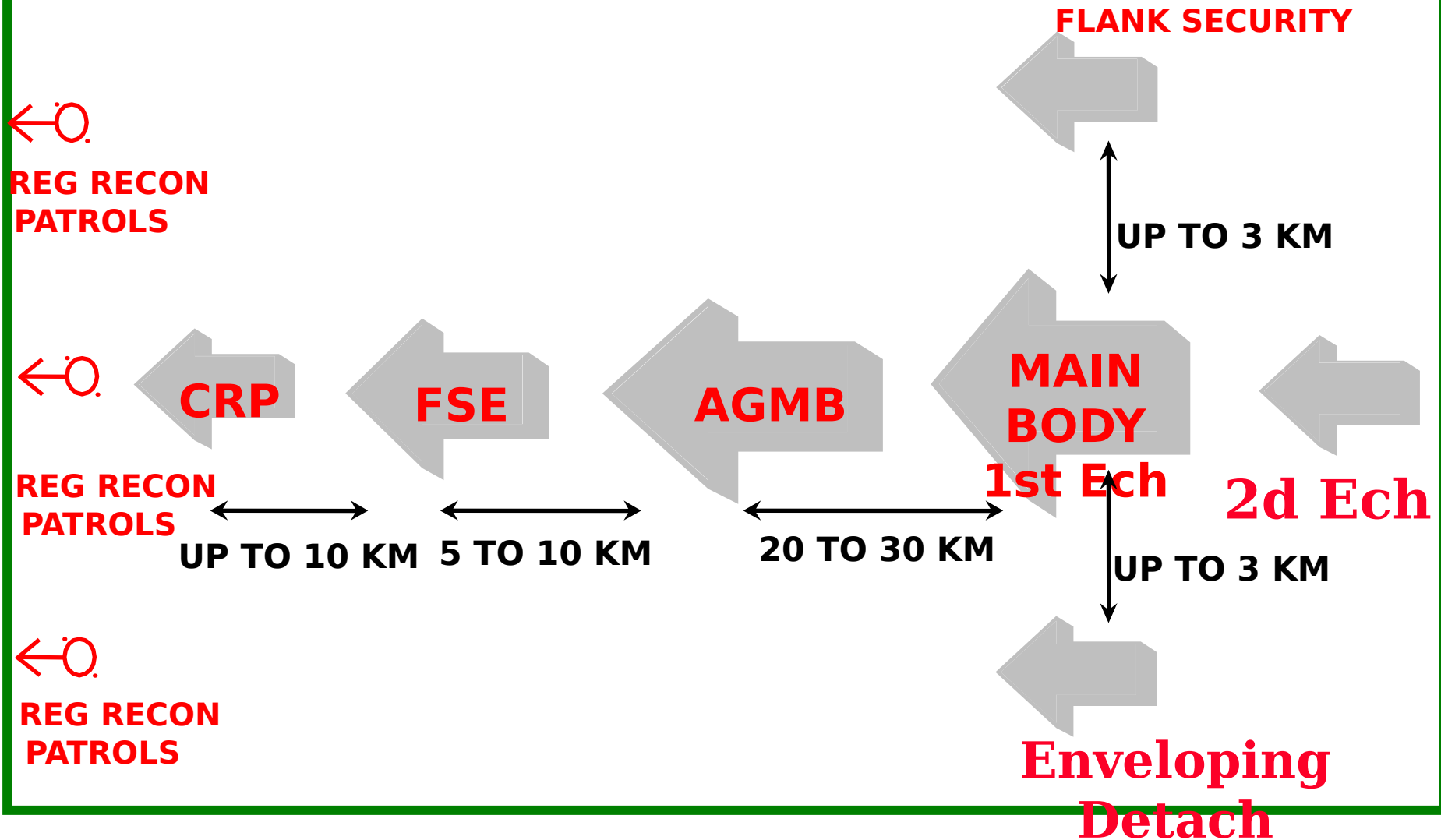
SUPPORTING EFFORT



2D ECHELON



MRR MARCH FORMATION ADVANCE GUARD





ENEMY ARTILLERY CAPABILITIES



NAME	# TUBES	SYSTEM	LOCATION	RANGE	BURST DIAMETER
2S12	6	120MM MORT	MRB	7.2 KM	250M
2S1	18	122MM HOW	RAG	15.3 KM	250M
2S3	18	152MM HOW	RAG	17.2-20.5 KM	250M
2S19	18	152MM HOW	RAG	28-30 KM	250M
2S5	18	152MM HOW	DAG	28-33 KM	250M
2S7	12	203MM HOW	AAG	37.5-50 KM	250M
BM21	18 LAUNCHERS	122MM RKT	DAG	30 KM	250M
BM22	18 LAUNCHERS	220MM RKT	AAG	40 KM	250M
ARK-1	1 VEH	ACQ RADAR	DAG	15 KM EFF	NA



ENEMY INDIRECT FIRE CAPABILITIES



RAG

1 X 2S1 BN
3 X 2S19 BN

48 BN VOLLEYS
180 BN VOLLEYS

DAG

2 X 2S5 BN
1 X BM-21 BN

72 BN VOLLEYS
960 ROCKETS

MORTARS

4 X BATTERIES
VOLLEYS

240 BTRY

TOTAL:

300 BN VOLLEYS
960 ROCKETS
240 MORTAR BTRY

VOLLEYS

136



RISK MANAGEMENT



▲ THE ARMY'S DOCTRINAL PROCESS FOR IDENTIFYING AND CONTROLLING HAZARDS.

◆ WHAT IS IT ?



◆ RISK MANAGEMENT - A FIVE STEP PROCESS TO IDENTIFY ACTIONS WHICH COULD HELP CDRs ELIMINATE, REDUCE OR MINIMIZE RISK WHILE MAXIMIZING FORCE PROTECTION



◆ RISK ASSESSMENT

- ◆ PART OF RISK MANAGEMENT
- ◆ IDENTIFIES THE AREAS PRESENTING THE HIGHEST RISK TO FORCE PROTECTION
- ◆ DETAILED ANALYSIS OF EACH COA's C2 AND P2 - POSITIVE AND PROCEDURAL - MEASURES IDENTIFIED DURING STEP 8 OF THE WAR GAME (WAR GAME THE BATTLE AND ASSESS RESULTS)



RISK MANAGEMENT



THE FIVE STEPS IN RISK MANAGEMENT ?

1. IDENTIFY THE HAZARDS (ASSOCIATED WITH EVENTS)... CONDITIONS THAT COULD LEAD TO ACCIDENTS, LOSS OF COMBAT POWER.

2. ASSESS THE HAZARDS... DETERMINE THE POTENTIAL MAGNITUDE OF THE HAZARD AND DETERMINE A LEVEL OF RISK.

3. SELECT THE CONTROLS AND MAKE A DECISION... RISKS THAT CANNOT BE ELIMINATED MUST BE CONTROLLED.

4. IMPLEMENT CONTROLS... CONTROL MEASURES MUST BE PART OF THE OPORD... LEADERS MUST ENSURE SOLDIERS KNOW THE POTENTIAL HAZARDS & CONTROL THE MEASURES TO REDUCE THE RISK

5. SUPERVISE.



MOJAVIAN MEMORIES